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SECRETARY OF THE AIR FORCE**

**AIR FORCE INSTRUCTION 13-1CRC
VOLUME 3**



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Space, Missile, Command and Control

***OPERATING PROCEDURES - CONTROL
AND REPORTING CENTER (CRC)***

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This instruction implements policy guidance in Air Force (AF) Policy Directive 13-1, *Command and Control Enterprise (C2 Enterprise)*. This instruction establishes guidance for employment of the Control and Reporting Center (CRC) of the C2 Enterprise. It establishes procedures for mission planning, execution, and reporting. It describes general duties and responsibilities for personnel serving in either an active component and/or ANG CRC. The provisions of this instruction apply to Commanders, Operations Supervisors, and Operations Crew Members assigned or attached to applicable units IAW paragraph 1.1 in Air Combat Command (ACC), United States Air Forces in Europe-Air Forces Africa (USAFE-AFAFRICA), and the Air National Guard (ANG). This AFI does not apply to the US Air Force Reserve or the Civil Air Patrol. Major Commands (MAJCOM) are to forward proposed MAJCOM-level supplements to this volume to HQ USAF/A3OY, for approval prior to publication in accordance with (IAW) AFI 33-360, *Publications and Forms Management*. Copies of approved and published MAJCOM-level supplements will be provided by the issuing MAJCOM to HQ USAF/A3OY, HQ ACC/A3C, and the user MAJCOM and NGB offices of primary responsibility (OPR). The reporting requirement in this publication is exempt from licensing in accordance with (IAW) AFI 33-324, *The Air Force Information Collections and Reports Management Program*.

The authorities to waive wing/unit level requirements in this publication are identified with a Tier ("T-0, T-1, T-2, T-3") number following the compliance statement. See AFI 33-360 for a description of the authorities associated with the Tier numbers. Submit requests for waivers

through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the Publication OPR for non-tiered compliance items.

Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route AF Forms 847 from the field through the appropriate functional chain of command.

Ensure that all records created as a result of processes prescribed in this publication are maintained IAW AFMAN 33-363, *Management of Records*, and disposed of IAW the Air Force Records Disposition Schedule (RDS).

SUMMARY OF CHANGES

This interim change revises AFI 13-1CRCV3 by (1) correcting office symbols for various organizations including OPR, (2) implementing waiver authority (tiering) guidance in AFI 33-360, (3) correcting Table 3.1 to include fourth Mission Crew Manning on new UTCs, (4) added Table 3.2 ANG Mission Crew Manning, (5) changing Operations Logbook responsibilities to Battle Staff Coordinator, (6) converted the DST duty position from a qualification to a certification, and (7) removing videotaping and hard disk requirements. A margin bar (|) indicates newly revised material.

Chapter 1—GENERAL INFORMATION	6
1.1. General Purpose.	6
1.2. Mission Crew Responsibility.	6
1.3. Waivers.	6
1.4. Supplements.	7
1.5. Recommended Changes.	7
Chapter 2—MISSION PLANNING	8
2.1. Mission Planning Guidelines.	8
2.2. Responsibilities.	8
2.3. Forms and Logs.	8
2.4. Briefings/Debriefings.	9
2.5. Mission Briefing Requirements.	10
2.6. Mission Planning Task Overview.	10
2.7. Local Checklists/Crew Aids.	11
2.8. Theater Procedures/Crew Aids.	11
2.9. Mission Planning Cell (MPC).	11
Figure 2.1. MPC Manning.	12

Chapter 3—OPERATIONS	13
3.1. General.	13
3.2. Operations Management.	13
3.3. CRC Mission.	13
3.4. Tailored Equipment Configuration.	14
3.5. Mission Crew Manning.	15
Table 3.1. Active Component Battle Staff and Mission Crew Manning (4 Crews).	15
Table 3.2. ANG Battle Staff and Mission Crew Manning (2 Crews).	16
3.6. Crew Rest.	17
3.7. Mission Crew Duty Sections.	18
3.8. Common Mission Crew Responsibilities.	18
3.9. Local Operating Procedures (LOP).	19
3.10. Voice Tape Recording.	19
3.11.	20
3.12. Degraded Sensor Procedures.	21
3.13. Unit Command Center (UCC).	21
3.14. Ops Normal and On-Station Procedures.	26
3.15. Weapons Control Procedures.	28
3.16. Communications Procedures	28
3.17. Special Interest Track Procedures.	29
3.18. Off-Station and Post-Duty Shift Responsibilities.	29
Chapter 4—BATTLE STAFF DUTIES AND RESPONSIBILITIES	31
4.1. Battle Staff Overview.	31
4.2. Battle Management (BM) Responsibilities.	31
4.3. Commander (CC), (AFSC 13B3D) (Maj – Lt Col on G-series orders).	31
4.4. Battle Staff Coordinator (BSC)	33
4.5. Mission Crew Commander (MCC), (AFSC 13B3D) (Maj - Lt Col).	34
Chapter 5—WEAPONS	38
5.1. Weapons Overview.	38
5.2. Weapons Control Responsibilities.	38
5.3. Tactical Data Link (TDL) Management.	38
5.4. Combat Airspace Management Responsibilities.	38
5.5. Battle Management (BM) Responsibilities.	39

5.6.	Senior Director (SD), AFSC 13B3D, (1Lt - Maj).	39
5.7.	Air Defense Artillery Fire Control Officer (ADAFCO),	41
5.8.	Weapons Director (WD), AFSC 1C5/5/71D, (A1C – MSgt), or Air Weapons Officer (AWO), AFSC 13B3B, (2Lt – Capt), SEI 948.	43
Chapter 6—	SURVEILLANCE DUTIES AND RESPONSIBILITIES	47
6.1.	Surveillance Overview.	47
6.2.	Surveillance Responsibilities.	47
6.3.	Tactical Data Link (TDL) Management.	47
6.4.	Electronic Protection Technician (EPT).	47
6.5.	Combat Airspace Management Responsibilities.	48
6.6.	Battle Management (BM) Responsibilities.	48
6.7.	Air Surveillance Officer (ASO) AFSC 13B3D (1Lt - Major).	48
6.8.	Air Surveillance Technician (AST).	52
6.9.	Interface Control Technician (ICT).	56
6.10.	Data Systems Technician (DST).	59
6.11.	Electronic Protection Technician (EPT), AFSC 1C55/71 (SrA – TSgt), SEI 944.	61
6.12.	Surveillance Technician (ST).	63
Chapter 7—	TACTICAL DATA REPORTING	65
7.1.	General.	65
7.2.	Tactical Data Link Operations.	65
7.3.	Joint and Air Force Reporting.	65
Table 7.1.	Joint and Air Force Reporting.	65
Chapter 8—	ADMINISTRATIVE REQUIREMENTS	68
8.1.	General.	68
8.2.	Disposition of Documentation.	68
8.3.	Forms Requirements.	68
8.4.	Operations Checklists and Crew Aids.	68
8.5.	COMSEC Requirements.	70
8.6.	Operations Information File (OIF).	70
8.7.	Operations Logbook.	70
Attachment 1—	GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION	72
Attachment 2—	VOICE TELL FORMATS	81

Attachment 3—INITIAL COORDINATION MEETING GUIDE(MCC CONDUCT) (BRIEF ONLY APPLICABLE ITEMS)	86
Attachment 4—COORDINATION/EXECUTION BRIEFING GUIDE (MCC)—(DISCUSS ONLY APPLICABLE ITEMS)	88
Attachment 5—DELETED	95
Attachment 6—MISSION PLANNING CELL DUTIES AND RESPONSIBILITIES	96
Attachment 7—DEGRADED OPERATIONS	98
Attachment 8—PRIORITIES FOR RECORDING ASSIGNMENTS	99
Attachment 9—POSITIONAL CHECKLISTS	100
Attachment 10—CRC EMPLOYMENT STANDARDS	109
Attachment 11—PERIODIC RADAR EVALUATION PROGRAM WORKSHEET FOR CRC (PAGE 1 OF 2)	112

Chapter 1

GENERAL INFORMATION

1.1. General Purpose. This instruction establishes responsibilities, policies and procedures applicable to all Air Control Squadrons (ACS), Test Squadrons (TS), and Field Training Units (FTU) that employ or train utilizing TYQ-23 Modular Control Equipment (MCE). The remaining unit instructions contain detailed procedures and criteria for the evaluation of individuals assigned operations duties by specific systems.

1.1.1. Scope. This instruction outlines the procedures applicable to the conduct of operations of the Control and Reporting Center (CRC), normally equipped with the MCE weapons systems. With the complementary references, this volume prescribes standard operating procedures for all CRC operations crews and all management levels concerned with the operation of CRC equipment.

1.1.1.1. In the absence of additional guidance, CRC mission crews operating equipment other than MCE equipment will use this volume as baseline for conduct of operations, at the discretion of the deployed Commander (CC), Major Command (MAJCOM), or other authorities.

1.1.1.2. This instruction does not provide tactics, techniques, or procedures (TTP) for employing the CRC in a combat environment. Guidance on tactical employment of the CRC can be found in AFTTP 3-1, *Theater Air Control Squadron* (TACS) and AFTTP 3-3, *Theater Air Ground System* (TAGS) and related volumes.

1.2. Mission Crew Responsibility. This volume, in conjunction with other governing directives, prescribes procedures for employing the CRC under most circumstances. It is not a substitute for sound judgment. Procedures not specifically addressed may be accomplished IAW theater guidance. Deviations will be reported through the Operational Chain-of-Command Tactical Control (TACON) authority (T-3).

1.3. Waivers.

1.3.1. Waiver authority for requirements of this volume will be IAW AFI-33-360, Publications and Forms Management. Waiver requests must come from commanders (or civilian directors) of the affected unit seeking relief from compliance through the command chain up to the appropriate tier approval authority (i.e., Tier 0, 1, 2, 3) (or publications approval authority if non-tiered). See AFI 33-360 for definition of Tier Ratings.

1.3.2. Waiver requests may be sent via email or memorandum, and include the following:

1.3.2.1. Reference and text of the specific requirement for which the commander/director is requesting a waiver.

1.3.2.2. Rationale for the waiver: Explain which of the following three reasons IAW AFI 33-360, apply and describe why:

1.3.2.2.1. The cost of compliance creates unacceptable risk to a higher priority task;

1.3.2.2.2. The expected cost of compliance outweighs the benefit;

1.3.2.2.3. Personnel cannot comply with the requirement due to a lack of resources (training, funds, equipment, facilities, guidance or manpower).

1.3.2.3. Time period or circumstance for which the waiver is required.

1.3.2.4. Risk mitigation measures the requesting commander will implement during the waiver period.

1.3.2.5. Impact if waiver is disapproved.

1.3.2.6. Approved waivers will be uploaded into the unit's Management Internal Control Toolset (MICT) for inspection activity review and publication OPR's situational awareness/filing.

1.3.3. USAFE-AFAFRICA/A3C and NGB/A3Y will forward a copy of all approved waivers for their units to ACC/A3C. ACC/A3C will, in turn, forward a copy of all approved waivers for their units to USAFE-AFAFRICA/A3C, NGB/A3Y, and AF/A3OY. Units will forward all approved waivers and report all deviations or exceptions without waiver, through their chain of command, to MAJCOM OPR (T-2).

1.4. Supplements. All proposed supplements to this instruction will be submitted through channels to USAF/A3OY OPR for approval. MAJCOMs will forward a copy of all approved supplements to AF/A3O-AYO.

1.5. Recommended Changes. Send comments and suggested improvements to this volume on an AF Form 847, *Recommendation for Change of Publication*, through channels to the MAJCOM. Forward approved recommendations to HQ ACC/A3YG.

Chapter 2

MISSION PLANNING

2.1. Mission Planning Guidelines. The Squadron/Unit Director of Operations (DO) directs the execution of the unit's operations schedule. The DO ensures that all operations personnel provide crews with the requisite support to plan and execute their mission. The DO ensures crews/mission planners have no barriers to mission planning and ensure that every mission is thoroughly planned, briefed, executed, and debriefed.

2.1.1. Mission Planning Options. The DO normally chooses from three mission planning profiles when executing the daily in-garrison operating schedule or the Air Tasking Order (ATO) cycle: prior-day mission planning, same-day mission plan/execute, and Mission Planning Cell (MPC) operations.

2.1.1.1. Prior-day mission planning. Mission planning is held the duty day prior to execution. This option is preferred for Mission Training Exercises (MTE).

2.1.1.2. Same-day mission planning. Mission planning is held the same duty day as the operation event. This option is preferred for 24-hour operations in the absence of a MPC.

2.1.2. Mission Planning Cell (MPC) operations. Mission planning is conducted by a dedicated MPC in accordance with **Section 2.9** and **Attachment 6** of this instruction. This option is preferred for 24-hour operations when manning is available.

2.1.2.1. The intent of mission planning is to ensure the crew is properly prepared to execute the tasked mission, to have on hand all applicable mission materials, and debrief and capture applicable lessons learned. The use of slides, forms, or other administrative products is a means to the end of preparing the crew, but is not necessary in order to conduct mission planning.

2.2. Responsibilities. As the Officer in Charge (OIC), the responsibility for mission planning rests with the Mission Crew Commander (MCC). Operations crews may perform their own mission planning or units may utilize MPCs in order to meet mission planning requirements. In any case, qualified individuals are designated to perform mission planning and/or briefings/debriefings. Units develop specific procedures to ensure all mission crew members are thoroughly prepared for each duty shift or event.

2.3. Forms and Logs. The DO ensures AF Form 4145, *Daily Activity Log*, AF Form 4146, *Mission Briefing Guide*, DD Form 1972, *Joint Tactical Air Strike Request*, DD Form 1975, *Joint Tactical Air Reconnaissance/Surveillance Request*, and Forward Air Control – Close Air Support (FAC CAS) 9-Line Briefing Form are readily available to meet operational requirements in support of CRC daily operations.

Note: FTUs will use only AF Forms 4145 and 4146 (T-2).

2.3.1. AF Form 4145, *Daily Activity Log*. The MCC or DO designee is responsible for the Daily Activity Log. The form is required to be completed and signed at the completion of each operations crew shift and forwarded to the DO for approval and signature. The daily activity log provides a complete summary of all crew operations for a particular shift and is an important tool for data correlation and analysis.

2.3.2. AF Form 4146, *Mission Briefing Guide*. Use the *Mission Briefing Guide* to brief missions, record mission results, and serve as a record of unit control activities. Air Weapons Officers/Weapons Directors (WDs) use the form for all control activities conducted and forwarded to the MCC or crew leader for review and attach to AF Form 4145, *Daily Activity Log*.

2.3.3. Operations Logbook. The operations logbook is the official record of events that occurred during UCC activation for major theater operations and real world contingency operations or in-garrison live training missions (if manning allows, DMO and simulated missions can also be logged). The purpose is to maintain an accurate and detailed record of all significant events pertaining to operations occurring during each crew shift or event. Of primary importance are specific events that may result in subsequent investigations. Secondarily, information contained in the logbook may result in significant lessons learned. The BSC will ensure that the operations logbook is properly maintained IAW Attachment 5 (T-2).

2.3.3.1. The operations logbook, while not a mission planning document, will be reviewed prior to assumption of mission operations responsibility for pertinent information regarding equipment status, lessons learned, and other pertinent mission information from previous days in connection with current mission operations (T-3).

2.4. Briefings/Debriefings. As the OIC, the MCC briefs/debriefs all crewmembers to ensure safe/effective mission accomplishment. Local briefing guides (developed IAW Attachment 3 and Attachment 4 of this instruction) will be used to provide a reference list of items that apply to a particular mission and will be used as the basis for briefings/debriefings (T-3). Brief items in any logical sequence; and those items formally documented in publications, such as local operations standards, may be briefed as “standard.” All crew members attend briefings/debriefings unless specifically excused by the MCC unless local procedures dictate otherwise.

2.4.1. In-Garrison (Training) Operations. While the CRC is in-garrison, the unit is less likely to be conducting 24-hour operations. Mission planning is oriented toward the event or scenario. Note that the event or scenario can be a live-fly event (fighter support), a tactical data link (TDL) exercise, a MTE, or any other scheduled training event.

2.4.2. Contingency (24-hour) Operations. While the CRC is conducting contingency or exercise operations on a 24-hour basis, mission planning is oriented towards the duty shift coming on at the time of the Step Briefing. During 24-hour operations, the MCC coming on shift or the MPC Chief coordinates with the current on-position MCC to gather situational awareness on the current operation and conducts mission planning to cover the period of the duty shift. In most 24-hour operations, only a crew step brief is conducted prior to positional change-over.

2.4.3. Debriefings. Regardless of using in-garrison or contingency operations mission planning guidelines, the MCC conducts a crew debrief to capture lessons learned and improve crew and system effectiveness. Once an MPC chief has been appointed, the MPC chief is responsible for tracking lessons learned and briefing them to follow-on crews as soon as possible after the crew event.

2.5. Mission Briefing Requirements. The squadron CC, as applicable, may waive requirements contained in this paragraph if deemed necessary to accomplish a specific mission.

2.5.1. In-Garrison Operation Briefings. During in-garrison operations the planning/briefing sequence is 1) Pre-mission planning, 2) Section specialized briefings, and 3) Step brief. The pre-mission briefing normally takes place after the crew reports on the day of the scheduled missions. Specialized briefings are conducted as required by each section to cover unique requirement within that section (e.g., surveillance section). The step brief is conducted when and where the situation and timing allows for the sole purpose of capturing and disseminating any last minute or developing information critical to the mission crew. It can be conducted one-on-one, by section, or to the entire crew.

2.5.2. Contingency Operation Briefings. During contingency operations, the planning/briefing sequence is generally the same as in-garrison operations, but can be limited to a step or on-position briefing. The MCC determines the briefing requirements and is supported by the MPC.

2.5.3. Crew Planning. MCCs use Attachment 3 and Attachment 4 and locally generated crew aids as guides to plan and brief the applicable items to the crew.

Note: Units develop and document guidance for items that are commonly briefed as “standard.” The purpose of unit or local standards is to reduce the briefing time of administrative tasks to allow for concentration on the mission. In no case do these procedures relieve the operations crew of the responsibility to comply with USAF directives. Operations crews use these procedures unless conditions, objectives or execution dictate the MCC/MPC Chief to brief as “non-standard.”

2.6. Mission Planning Task Overview. The following items are accomplished during mission planning by the MPC or applicable duty functions if the MPC is not operational.

2.6.1. MCCs ensure mission activities are planned according to applicable checklists and guides.

2.6.2. Objectives. MCCs develop crew objectives for the event or duty shift. Air Surveillance Officers (ASO) and Senior Directors (SD) develop objectives that support the crew objectives within their sections.

2.6.3. MCC, SD, ASO, Interface Control Technician (ICT) and Battle Staff Coordinator (BSC) and CC develop a communication plan to ensure accomplishment of mission requirements.

2.6.4. The DST coordinates all computer software requirements. Minimum software requirements will be IAW local operating procedures (T-3). Database inputs from individual sections should be provided to the DST well prior to the step brief.

2.6.5. The ASO, Air Surveillance Technician (AST), or their designated appointee obtains equipment status from the appropriate Maintenance Operations Center (MOC)/Job Control (JC). During contingency operations the BSC is the point of contact with the MOC/JC and will record all statuses in the logbook (T-3).

2.6.6. The MCC assesses impact of equipment limitations and adjust tasking as necessary. The MCC conducts a final review of mission crew planning.

2.6.7. Details on mission planning flow can be found in Appendix 3 and Appendix 4 of this instruction.

2.6.8. For local live flying training operations, the Air Weapons Officer (AWO)/Weapons Director (WD) will coordinate to receive a briefing from the flight leads of all missions to be controlled (T-3).

2.7. Local Checklists/Crew Aids. Locally produced checklists and crew aids include as a minimum:

2.7.1. Mission planning checklists (as required).

2.7.2. Briefing guides (as required).

2.8. Theater Procedures/Crew Aids. Units specifically tasked to support an area of operations (AO) will develop theater procedure crew aids (classified/unclassified) and make them available to the crew upon deployment to the theater (T-3). As a minimum, these aids will include (T-3):

2.8.1. Communications plans.

2.8.2. Crew positional actions/procedures.

2.8.3. ID criteria and procedures (ID Matrix)

2.8.4. Rules of Engagement (ROE).

2.8.5. Link Architecture

2.8.6. Equipment set-up and management (if using equipment different than unit has in garrison).

2.8.7. Callsign list of applicable units, aircraft, etc.

2.8.8. Other information deemed necessary by the host unit.

2.9. Mission Planning Cell (MPC). Successful mission accomplishment is a direct result of a clear and concise understanding of the CRC role in supporting and achieving the training or campaign objectives that can be achieved through mission planning. Upon anticipation or receipt of a real-world or exercise alert, warning, or execute order, the unit CC should activate the MPC. The CRC MPC is the single point of contact for planning, tactical level coordination, and debriefing. The MPC provides the staff and the mission crew with the most current mission execution information derived from all available sources. The ANG CRC MPC function is accomplished by the duty crew. The MPC should be implemented for MTEs to develop, exercise and validate unit planning TTPs (T-3).

2.9.1. When manning is available and daily shift rotations prevent the duty crew from conducting their own mission planning, the unit DO appoints the MPC Chief and ensures the MPC is manned. MPC manning can be tailored in size, composition, functions, or grade to meet mission requirements. Specific MPC duties and responsibilities are outlined in **AFTTP 3-1CRC** and **Attachment 6** to this document.

2.9.2. **MPC Manning.** The MPC should contain personnel tailored to the particular mission being conducted. During operations using a full complement of duty crew, an MPC should include (**Table 2.1**):

Figure 2.1. MPC Manning.

MCC	1
SD	2
WD/AWO	2
ASO	1
AST	2
ICT	2
Intel	2

Note: If necessary, personnel from the mission crew augment the MPC as required. MPC can be tailored in size/manning/grade to meet mission requirements.

2.9.2.1. DELETED

2.9.2.2. DELETED

2.9.2.3. DELETED

2.9.3. DELETED

Chapter 3

OPERATIONS

3.1. General. This chapter contains roles and responsibilities for certain mission crew positions. This information is in addition to AFI 11-214, *Air Operations Rules and Procedures*; AFTTP 3-1.26, *Tactical Employment of the Theater Air Control System (TACS)*; AFI 13-1 CRC Vol. 1 *Control and Reporting Center—Training*; AFI 13-1 CRC Vol.2, *Control and Reporting Center Evaluation Criteria*, and the current syllabus for the respective crew positions. Not all positions have additional information.

3.1.1. FTUs will adhere to paragraphs 3.2, 3.9, and 3.10 and subparagraphs 3.6.1 and 3.14.2.5 (T-3).

3.2. Operations Management.

3.2.1. The ACS/FTU/TS unit Commander (CC) and Director of Operations (DO) will be an Active Component Air Force/Air National Guard (ANG) field grade officer rank and will possess a 13B3D Air Force Specialty Code (AFSC) (T-2). The CRC CC/DO is designated to perform duties of the Battle Staff (BS). Each unit also has an Operations Superintendent manned by a Chief Master Sergeant possessing a 1C500 AFSC. The Operations Superintendent minimum grade requirement for the TS/FTU will be a Senior Master Sergeant possessing a 1C591 AFSC (T-3).

3.2.2. The DO is responsible for ensuring operations personnel are trained, equipped, and available to execute the tasks associated with the unit's mission. The DO creates, manages, and executes a daily schedule assigning duties to assigned personnel.

3.2.3. During daily, in-garrison training operations, the DO performs the duties of the BS, and establishes procedures for managing daily operations normally handled by the Unit Command Center (UCC).

3.3. CRC Mission. The operational mission of a CRC is to provide the Joint/Combined Forces Air Component Commander (J/CFACC) with the means to direct and execute air operations. The CRC provides the Air and Space Operations Center (AOC) the primary interface for centralized command of BMC2 agencies from all the services contributing to the air campaign plan. The CRC may be responsible for:

3.3.1. Battle Management Command and Control (BMC2). The CRC BMC2 mission is supported by the Modular Control System (MCS). The MCS is the equipment that provides the visual displays, communications connectivity, and the interoperability systems/components that enable CRC operators to make tactical decisions in the battlespace.

3.3.1.1. Battle Management (BM). The Command and Control (C2) of air operations in a decentralized execution mode, by managing, disseminating, and assigning mission tasks defined in appropriate tasking orders. This also includes using ground and airborne sensors to provide surveillance coverage in an assigned area.

3.3.2. Surveillance. Surveillance functions include detection, identification, classification, and tracking of airborne objects. CRC sensors (organic and netted), detect and provide cueing to engage hostile manned and unmanned aircraft as well as some cruise missiles.

Additional surveillance functions include electronic protection (EP) and the recognition and reporting of electronic attack (EA).

3.3.2.1. Combat Identification (CID). The CRC has the capability to disseminate timely, accurate, and relevant identification information to allow engagement of hostile targets and avoid fratricide. In addition to organic system capabilities that support lack-of-friendly and presence-of-friendly characterization i.e., Identification, Friend, or Foe/Selective Identification Feature (IFF/SIF), other capabilities and information from other CID capable systems/assets are used to provide the CRC a positive identification (PID) capability.

3.3.3. Weapons Control. The CRC supports and/or coordinates offensive and defensive counter air (OCA/DCA), air interdiction (AI), air refueling (AR), close air support (CAS), combat search and rescue (CSAR), search and rescue, high value airborne asset protection (HVAA), suppression/destruction of enemy air defenses (S/DEAD), electronic warfare (EW), Intelligence, Surveillance and Reconnaissance (ISR), special operations, and the direction of air defense artillery (ADA) systems in theater air defense (TAD).

3.3.4. Combat Airspace Management. The CRC provides airspace management in the implementation of the Airspace Control Order (ACO). These tasks include pre/post-strike force marshalling and recovery (referred to functionally as Check-In/Out), en-route tactical flight following in expeditionary environments, control in support of ground forces (e.g., Troops in Contact (TIC) support) and Continental United States (CONUS) air defense/homeland security support.

3.3.5. Tactical Data Link (TDL) Management. The CRC consolidates organic and nonorganic sensors into the common tactical picture (CTP) for distribution over TDLs. Under the direction of the AOC's Joint Interface Control Officer (JICO), the CRC manages the theater TDL architecture within its assigned operational area. The CRC supports Link 11, Link 11B, Link 16, Situational Awareness Data Link (SADL), and North Atlantic Treaty Organization (NATO) Link 1. The CRC can act as data forwarder and transmit the CTP to theater C2 nodes to include lateral, joint, and combined agencies in addition to the AOC.

3.4. Tailored Equipment Configuration. The CRC equipment is designed to be deployed in a configuration that meets the mission tasking. This results in a flexible system package capable of meeting a broad spectrum of operational mission profiles. The CRC uses scalable unit type codes (UTCs) to support combatant commander mission requirements. UTCs are capability focused to accomplish the assigned mission and consist of manpower and/or equipment. CRC UTCs can be tailored based on the theater operational mission and provide an efficient means to deliver the right amount of capability to the warfighter. The current CRC executes BMC2 capabilities through employment of deployed UTCs. It executes Battlespace Awareness (BA) capabilities through employment of Deployable Radar (DR) UTCs. Associated communications, vehicles, and support equipment are resident with the UTCs. Detailed descriptions of the UTCs are contained in the CRC Mission Capability (MISCAP) statements.

3.4.1. The CRC is subordinate to the AOC and provides an organic communications capability in support of its functions. The CRC deploys with up to four MCS Operations Modules (OMs), two AN/TPS-75 Radars, Tri-Service Tactical Communications System (TRI-TAC) communications equipment, Theater Deployable Communications (TDC), JTIDS

Module (JM) and supporting equipment. CRCs can extend radar coverage through the use of multiple sensors and remoting techniques, while the JMs support data link transmission.

3.4.2. An additional augmented capability for the CRC is the use of non-organic radar access (NORA) which allows the CRC to access non-AN/TPS-75 Radars such as civilian air traffic control radars or other host nation tactical radars to further expand radar coverage areas. However, mission planning must be conducted since not all civil and other tactical RADARS may work using the NORA (T-3). Additional equipment such as AN/TRC-215, Remote Radio Secure Voice System (RRSVS) is required to fully and successfully integrate non-organic radars and communications (for control of aircraft) for those sensors located Beyond Line of Sight (BLOS) from the CRC.

3.5. Mission Crew Manning. A CRC mission crew is defined below (**Table 3.1** and **Table 3.2**). Positional descriptions highlight the specific positional/crew duties and responsibilities. Unit commanders may tailor crews to meet mission requirements. The Air Defense Artillery Fire Control Officer (ADAFCO) is assigned to CRC once the Area Air Defense Commander or designated representative validates the positions. Currently, three crews are required for a full CRC (all core UTCs utilized). This is expected to increase to four crews in FY 2010. The three mission crews and battle staff are comprised of, but not limited to, the following optimum manning by grade per position:

Table 3.1. Active Component Battle Staff and Mission Crew Manning (4 Crews).

Active Component Crew Manning		
Battle Staff		
Duty Position	Personnel	Rank
Commander/Director of Operations (CC/DO)	2	Lt Col, Maj
Intelligence (Intel)	2	Capt, SSgt/SrA
Battle Staff Coordinator (BSC)	4	CMSgt, SMSgt, MSgt
Mission Crew Commander (MCC)	4 ¹	Lt Col, Maj, Capt
Battle Staff Manning Total	8	
Mission Crew		
Mission Crew Commander (MCC)	4 ¹	Lt Col, Maj, Capt
Senior Director (SD)	4	Maj, Capt, Lt
Weapons Director (WD)/Air Weapons Officer (AWO)	20 ²	MSgt, TSgt, SSgt, SrA, A1C
Air Surveillance Officer (ASO)	4	Capt, Lt
Air Surveillance Technician (AST)	4	MSgt, TSgt
Interface Control Technician (ICT)	12	TSgt, SSgt, SrA, A1C
Surveillance Technician (ST)	16	SrA, A1C, Amn, AB
Electronic Protection Technician (EPT)	8	TSgt, SSgt, SrA, A1C
ADAFCO/ADAFCA	6 ³	MAJ, CPT, CW4 (ADAFCO) / SFC, SSG, SPC (ADAFCA)
Data Systems Technician (DST)	- ⁴	Determined by unit/CC or DO

Mission Crew Manning Total	72	
Total Manning	80	
Notes: 1. The MCC is considered a member of both the Battle Staff and the Mission Crew for functional interfaces, but only 1 assigned per crew. 2. AWOs can fill WD requirements as needed. 3. The ADAFCO/ADAFCA are augmentees to the mission crew when required and are not included in total manning. Unless further augmentation is received, the ADAFCO team is task organized for 3 manning crews only. 4. The DST is a certification and is not assigned to the mission crew.		

Table 3.2. ANG Battle Staff and Mission Crew Manning (2 Crews).

ANG Mission Crew Manning		
Battle Staff		
Duty Position	Personnel	Rank
CC/DO	2 ¹	Lt Col
MCC	2 ²	Maj
Intel	2	Maj, MSgt
BSC	2	CMSgt, SMSgt
Battle Staff Manning Total	6	
Mission Crew		
MCC	2 ¹	Maj
SD	2	Maj
WD/AWO	10 ³	MSgt, TSgt, SSgt
ASO	2	Maj
AST	2	MSgt, TSgt
ICT	6	TSgt, SSgt
ADAFCO/ADAFCA	6 ⁴	
ST	8	TSgt, SSgt
EPT	3 ⁵	TSgt
Data Systems Technician (DST)	- ⁶	Determined by unit/CC or DO
Mission Crew Manning Total	41	
Total Manning	47	
Notes: 1. The CC and DO will be qualified as Mission Crew Commanders 2. The MCC is considered a member of both the Battle Staff and the Mission Crew for functional interfaces, but only 1 assigned per Mission Crew. 3. AWOs can fill WD requirements as needed. 4. An ADAFCO/ADAFCA are augmentees the mission crew when required and is <u>not</u> included in total Mission Crew manning. Unless further augmentation is received, the ADAFCO team is task organized for 3 manning crews only. 5. Three EPTs per single DR 6. The DST is a certification and is not assigned to the mission crew.		

3.5.1. Not every configuration requires personnel from each duty section to operate the equipment. The SQ/CC or SQ/DO determines the manning required to meet desired capability.

3.5.2. Minimum Manning In-Garrison Live-fly. The squadron/CC or DO will determine the minimum manning required for in-garrison live flying (T-3).

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3.5.2.6. DELETED

3.5.3. Other In-Garrison Minimum Crew Requirements. An MCC or DO determines the crew minimums for Mission Training Exercises (MTE), and contingency operations as the mission demands, specified in local operating standards.

3.5.4. Where less than a full crew is employed and no MCC is available, the senior ranking individual is designated the Senior Ranking Officer (SRO) and assumes the duties of the MCC as far as mission planning and execution are concerned.

3.5.4.1. The SRO will sign the AF Form 4145 in place of the MCC at the end of the appropriate duty shift (T-3).

3.5.4.2. The SRO will not sign the AF Form 4145 as the DO unless normally authorized to do so as the designated DO (T-3).

3.6. Crew Rest. Parent/Deployed Operations Group Commander may waive all or any part of a crew rest period (T-3). Crew members will enter crew rest a minimum of eight hours before show time (T-3). Crew rest normally begins 1.5 hours after debrief. If any crewmember must perform duties past the 1.5 hour period, crew rest does not begin until post-positional duties are completed (T-3).

3.6.1. Minimum crew rest period is eight hours. This provides the crew a minimum of eight hours of uninterrupted rest. If crew rest is interrupted so that an individual cannot get eight hours of uninterrupted rest, the individual must be afforded eight more hours of uninterrupted rest (T-3). Any interruption must be made only under the most exceptional circumstances (T-3).

3.7. Mission Crew Duty Sections. The operational duties of the Mission Crew are divided among three broad sections.

3.7.1. Battle Staff. Battle management is accomplished by the Battle Staff (BS), which consists of the following positions: CC, MCC, and BSC. The BS maintains maximum flexibility, responsiveness, and timeliness in the application of ACS resources. The BS reviews headquarters guidance and directives, monitors status, develops courses of action and implements the guidance as directed by the AOC. **Chapter 4** details the duties and responsibilities of the Battle Staff positions.

3.7.2. Weapons. The weapons section conducts the weapons control mission and combat airspace control functions under the supervision of the MCC. The weapons positions are the SD, WD, AWO, and Air Defense Artillery Fire Control Officer (ADAFCO) (when assigned). **Chapter 5** details the duties and responsibilities of the weapons positions.

3.7.2.1. Army Air Defense Artillery (ADA) asset employment will be coordinated and directed through the ADAFCO (T-3).

3.7.2.2. Three ADAFCOs will be required once the CRC has been tasked with Region Air Defense Commander (RADC)/Sector Air Defense Commander (SADC) duties IAW theater directives (T-3). The ADAFCO(s) are assigned to the CRC and execute as part of the CRC mission crew. The ADAFCO(s) are assigned a scope and necessary communications in order to execute the ADA mission. The ADAFCO coordinates with the SD.

3.7.3. Surveillance. The surveillance section conducts the surveillance and data management operations and some airspace control and battle management functions while under the supervision of the MCC. The surveillance section is comprised of the ASO, AST, ICT, DST, EPT, and ST. **Chapter 6** details the duties and responsibilities of the surveillance positions.

3.8. Common Mission Crew Responsibilities. Regardless of duty position section, the Mission Crew members share some common duty responsibilities and tasks in addition to the position-specific responsibilities outlined in the appropriate chapters of this instruction. These include:

3.8.1. Know the Commanders' intent and J/CFACC mission statement.

3.8.2. Attend crew briefing/debriefing and participate as required.

3.8.3. Configure and operate the Operator Console Unit Workstation (OCUWS) and Voice Communications Access Sub-unit (VCAS) IAW the N-series checklists to meet mission requirements. If certified to use a system other than V5 (e.g., BC3), then configure and operate the console of that system IAW with applicable checklists and technical orders (TO).

3.8.4. Read and interpret mission information on the OCUWS or other relevant scope/work stations.

3.8.5. Read and initial all items in the Operations Information File (OIF) read file prior to assuming the duty position for the assigned tour of duty.

3.8.6. Use and control classified materials IAW established security procedures; employ information assurance (e.g., OPSEC) procedures as required by regulations. Authenticate voice transmissions as needed.

3.8.7. Locate and report safety hazards in and around the OM, AN/TPS-75 van and other workspace areas. Use safety equipment as necessary and implement unit-level emergency procedures IAW checklists.

3.8.8. Prepare and conduct a positional changeover briefing with the oncoming mission crewmember prior to departing position IAW the positional changeover briefing guide and unit checklists, if applicable.

3.8.9. Obtain eight hours of crew rest between shifts. If combat/contingency operations prohibit proper crew rest, the Squadron CC/DO develops a plan to ensure crew members are capable of safely operating in their crew positions.

3.8.10. Review Operations Plan (OPLAN), ATO, ACO, Operational Tasking (OPTASK) LINK, Special Instructions (SPINS), ROE, Tactical Operations Data (TACOPDAT), Theater Missile Defense (TMD) Plan, lessons learned, aeronautical charts and other mission-specific documents. Be familiar with coordinate systems to be employed, geographical references (GEOREFS) and conduct area familiarization in the unit's operating location.

3.9. Local Operating Procedures (LOP). Each unit will create squadron operating standards which will further define local procedures for operating in the in-garrison, training environment (T-3). Theater or contingency SPINS define operating procedures for use in the theater or contingency environment. In the absence of instructions for the CRC contained in the SPINS, the deployed unit will develop operating standards for use in the theater or contingency environment (T-3).

3.9.1. The DO will sign the LOP and will file it in the Operational Information File (T-3).

3.9.2. The DO will ensure that the LOP is reviewed every 18 months (T-3).

3.9.2.1. The DO will sign a memorandum for record (MFR) which certifies the LOP for the next 18 month period (T-3). Only one MFR may be used to extend the period for the LOP.

3.9.2.2. Interim changes may be made to the LOP which do not cause the LOP to expire. Interim Changes (ICs) will be integrated into the LOP at the next 18 month review period (T-3). No MFR may be used to extend an LOP with ICs attached.

3.9.3. Individual templates for weapons and surveillance specialized briefs should be included in the LOP.

3.10. Voice Tape Recording. Tape recording live missions is essential to provide necessary information concerning aircraft accidents, aircraft emergencies, and/or any event resulting in a subsequent investigation. Tape recording also provides a valuable asset in determining lessons learned for the development of TTPs.

3.10.1. General. Various types of tape recorders are available to the CRC to satisfy tape recording requirements. Primary recorders used by the CRC are the recorder/reproducer (R/R) equipment in the OM and individual cassette tape voice recorders.

3.10.2. Priorities for Recording Assignments.

3.10.2.1. The MCC determines which positions are to be recorded; however, the MCC may delegate this task (e.g., to the SD). The priority of recording transmissions is mission dependent. Prioritization will include at a minimum the primary control guard

and primary aircraft control channel (T-3). Standard prioritizations are listed in [Attachment 8](#).

3.10.3. Operating Responsibilities and Procedures.

3.10.3.1. All missions involving the control of live aircraft will be recorded (T-3). If there is no R/R or other recording capability available, annotate the fact in the operations logbook, and notify the MCC or DO.

3.10.3.2. The DST prepares the recorder and manages the loading, unloading, storage, and labeling of tapes. The MCC/SRO will ensure that the tape is started prior to the assumption of daily duties or ops normal call (T-3).

3.10.3.2.1. At the FTU, Current Operations manages the storage and labeling of tapes. Loading and unloading is the responsibility of equipment checkout personnel and Instructor WD respectively. The MCC (or Weapons Instructor at the FTU) will ensure that the tape is started prior to the assumption of daily duties or ops normal call (T-3).

3.10.3.3. Change recording tapes at the end of the mission crew shift change.

3.10.3.4. Perform checks of the recorder at mission crew shift change to ensure full operation.

3.10.3.5. Ensure the following is annotated in the operations logbook at the beginning of each duty shift:

3.10.3.5.1. Tape number.

3.10.3.5.2. Start number point, if applicable (for voice cassette recorder).

3.10.3.5.3. Date and ZULU time.

3.10.3.5.4. Name of individual changing tape (when applicable).

3.10.3.6. Mark each complete tape with the following:

3.10.3.6.1. Tape number.

3.10.3.6.2. Date and time of tape stop.

3.10.3.7. Ensure tapes are marked, handled, and stored IAW DoD Directive 5200.1R, *Information Security* and AFI 31-401, *Information Security Program Management*.

3.10.3.8. Notify the ASO of recording malfunctions. At the FTU notify Current Operations.

3.10.4. Tape Retention. Retain recording tapes for 48 hours for in-garrison training and 30 days during combat/contingency operations. Recording tapes containing information concerning an aircraft accident/incident will be identified, marked, and retained separately out of normal rotation usage until the incident is resolved or for a minimum of six months. The MCC or higher authority may direct a tape or tapes be retained for a specific reason. In such a case, mark the tape appropriately with the requester's name, rank, duty title, organization, and disposition instructions and retain out of normal rotation usage.

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3.12. Degraded Sensor Procedures. The CRC is a highly flexible system with many individual sensor components providing separate, supporting capabilities to the overall system. Individual components may fail during operations, leaving other components intact and providing limited overall capabilities. Refer to [Attachment 7](#) for tactical data reporting of degraded operations.

3.12.1. Operating with limited radar capabilities. Not every function of the CRC requires the use of active radar or IFF/SIF interrogation. A loss of organic primary or secondary radar can come about either by design (tailored configuration) or by equipment outage.

3.12.1.1. The MCC must report loss of primary/secondary radar to HHQ (AOC) or unit BS through reporting channels whenever such outage occurs as the result of mechanical failure (T-2). It is the judgment of the MCC or SD on duty to determine whether live-flight activity can continue with degraded sensors or whether the CRC must terminate activities until radar functions are restored (T-3). When subordinate to an AOC or similar HHQ structure, the MCC will make a recommendation to the AOC based on his or her sound judgment before ceasing operations (T-3). The MCC will inform the CC of subsequent decisions/actions taken (T-3).

3.12.1.2. When the CRC is conducting weapons control operations, the SD will advise the MCC of the impact of primary or secondary sensor loss to the safety of flight, weighing the risk factor of the mission involved against the benefits of continued operation in degraded conditions (T-3).

3.12.2. Operating with no radar capabilities. If neither the primary nor secondary radar is functioning, the MCC and SD will determine whether advisory control is possible (T-3). Advise affected agencies of the loss of radar capability.

3.13. Unit Command Center (UCC).

3.13.1. Battle Staff Workspace. Under most circumstances, the CC/DO is located with and conducts battle management from the UCC with the BSC and the unit supporting staff.

3.13.1.1. The UCC is established by the commander to facilitate centralized unit C2. The UCC is equipped with an array of tactical displays and communication assets to allow the commander and battle staff to facilitate planning, directing, coordinating, and controlling CRC operational and support activities.

3.13.1.2. It is the unit CC's responsibility to establish staff and operate the UCC. The UCC provides the CC a centralized point for unity of effort and efficient day-to-day unit coordination.

3.13.1.3. As a minimum, the UCC will be staffed with the CC/DO/BSC and the following sections: System Control (SYSCON), Maintenance Operations Center (MOC), Site Support, Force Protection (FP), Readiness, and the Intelligence section (T-3). Additionally, the UCC hosts those functions that ensure the security and functioning of the CRC site and personnel, serving as the central point for operations and maintenance information flow. Specific BMC2 CC/BSC roles and responsibilities are discussed separately in [Chapter 4](#).

- 3.13.1.3.1. When authority is delegated by the CRC commander, the BSC serves as the executive agent for the commander for combat support activities. The CC/BSC directs the combat support function to ensure mission requirements are met through directing and coordinating as appropriate with internal sections and external agencies. The CC/BSC facilitates planning, directing, coordinating, and controlling support activities of the unit's subordinate mission support sections. The CC provides designated authorities both laterally and vertically with essential information to permit effective decision-making. The CC/BSC must have thorough knowledge of the tasked mission, mission support equipment/systems, and personnel (T-3). These duties apply to the deployment, employment, and redeployment phases of any operation.
- 3.13.1.4. The CC/DO and BSC as a minimum are responsible for the following:
- 3.13.1.4.1. The general health and welfare of unit personnel.
 - 3.13.1.4.2. Enhancing the CRC's daily unity of effort to support the mission.
 - 3.13.1.4.3. Maintaining an Operations Log Book.
 - 3.13.1.4.4. Coordinating written memorandums of agreement/understanding (MOA/MOUs) for unit support.
 - 3.13.1.4.5. Disseminating common situational awareness to include Air Defense Warnings, Force Protection Conditions (FPCON), impending ground attacks, etc.
 - 3.13.1.4.6. Determining reporting responsibilities and establish procedures for preparing required situation reports (SITREP) to include status of Deployed Radars (DR) detachments.
 - 3.13.1.4.7. Establishing contingency plans, tactics, techniques, and procedures (TTP) in the event that any or all of the CRC elements are disabled or forced into an autonomous mode of operations
 - 3.13.1.4.8. Establishing contingency plans that contain TTPs in the event any single or all of the elements of the CRC relocate in either a prepared or contingency mode.
 - 3.13.1.4.9. Developing, implementing, and executing Emergency Action Procedures.
 - 3.13.1.4.10. Maintaining key personnel locator status.
 - 3.13.1.4.11. Maintaining visitor control and entry authorization listing.

- 3.13.1.4.12. Submitting the Commander's Operational reports IAW AFAM 10-206.
 - 3.13.1.4.13. Submitting Commander's Status of Readiness and Training (SORTS) IAW AFI 10-201.
 - 3.13.1.4.14. Maintaining Publications Folder IAW AFI13-1 Standardization/Evaluation Vol. 2.
 - 3.13.1.4.15. Maintaining OIF read file IAW AFI13-1 Standardization/Evaluation Vol. 2.
 - 3.13.1.4.16. Establishing casualty reporting procedures
 - 3.13.1.4.17. Establishing coordination lines with command Public Affairs (PA).
 - 3.13.1.4.18. Establishing lines of coordination for Meteorological support
 - 3.13.1.4.19. Establishing and maintaining host nation support.
 - 3.13.1.4.20. Establishing applicable checklists to ensure optimal unit support and protection
- 3.13.1.5. **System Control (SYSCON) Section.** The SYSCON function includes but is not limited to the following duties and responsibilities:
- 3.13.1.5.1. Managing the unit's communications/data systems.
 - 3.13.1.5.2. Functions as unit level network communication control center.
 - 3.13.1.5.3. Configuring unit communications IAW Theater OPORD, Annex K and other applicable theater communications directives.
 - 3.13.1.5.4. Ensures integration with joint/combined command, control, communications, computer, and intelligence (C4I) systems.
 - 3.13.1.5.5. Ensures the CC and BSC are aware of any condition that may disrupt the orderly and controlled execution of the unit's mission.
 - 3.13.1.5.6. Communicate systems status, production efforts, maintenance schedules, problem resolution, and system alternatives to both higher and lower echelons.
 - 3.13.1.5.7. Inform CC/BSC of all communications/data system activities.
- 3.13.1.6. **MOC.** The MOC function includes but is not limited to the following duties and responsibilities:
- 3.13.1.6.1. Facilitates maintenance and repair of mission equipment.
 - 3.13.1.6.2. Provides equipment status to the BSC.
 - 3.13.1.6.3. Provides dissemination of equipment status reports to the BSC.
 - 3.13.1.6.4. Maintains the maintenance and engineering net.
 - 3.13.1.6.5. Ensures the BSC is aware of any condition that may disrupt the orderly and controlled execution of the unit's mission.

3.13.1.7. **Site Support Section.** The Site Support Function includes but is not limited to sustaining the force once the unit is deployed. The Support section is responsible for but not limited to the following duties and responsibilities:

3.13.1.7.1. Facilitates the unit transition to a steady state operation

3.13.1.7.2. Ensures personnel issues to include medical, food, water, billeting, are met.

3.13.1.7.3. Facilitates protocol, public affairs, services, administrative supply, and transportation issues.

3.13.1.7.4. Monitoring personnel availability and replacement sourcing.

3.13.1.8. **Force Protection (FP) Section.** The NCOIC, Force Protection (FP) is responsible for but not limited to the following duties and responsibilities:

3.13.1.8.1. Organizes, trains, and equips organic and augmented security forces capable of defeating a Level 1 threat IAW CAF CRC CONEMP, AFM 10-100, AFH 31-302, and applicable AF Instructions.

3.13.1.8.2. Performs duties as required as a member of the initial site survey team.

3.13.1.8.3. Primary liaison for non-organic force protection assets (joint, host nation and coalition forces).

3.13.1.8.4. Develops site defense plan and supervises the construction of defensive positions to include the Entry Control Point (ECP).

3.13.1.8.5. Tactical dispersal of critical resources.

3.13.1.8.6. Use of camouflage, concealment, and deception (CCD) TTPs.

3.13.1.8.7. Responsible for making force protection recommendations to the CC/BSC.

3.13.1.8.8. Implements UCC checklists to respond to security events.

3.13.1.8.9. Ensures Information Security (INFOSEC) is practiced.

3.13.1.8.10. Ensures Communications Security (COMSEC) is practiced.

3.13.1.9. **Readiness Section.** The primary objective of the Readiness Section is to minimize the loss of operational capability caused by accidental, hostile or natural effects during peacetime or contingency operations.

3.13.1.9.1. Initiates measures to restore primary mission assets.

3.13.1.9.2. Advises the CC/BSC on measures planned, programmed, and initiated to ensure unit can operate during contingencies.

3.13.1.9.3. Works in close coordination with the security section on all matters of force protection.

3.13.1.9.4. Devises a strategy and formulates a plan for decentralizing vital operations during contingency's IAW 32-4001 and applicable instructions.

- 3.13.1.9.5. Ensures SADO/DDO through the CC/BSC, is aware of contingency degradation plan.
 - 3.13.1.9.6. Advises the CC/BSC on the dispersal, sheltering, evacuation or relocation of material and personnel.
 - 3.13.1.9.7. Manages and implements the Readiness defense programs IAW checklist.
 - 3.13.1.9.8. Provides planning and response guidance on mitigating effects of (chemical, biological, and nuclear (CBN) attacks.
 - 3.13.1.9.9. Ensures unit personnel assigned to, or identified for deployment to Chemical/Biological (CB) threat areas know how to conduct sustained operations at a contaminated installation IAW AFI 32-4007.
 - 3.13.1.9.10. Ensures procedures are in place to protect vital unit C2 systems from electro-magnetic pulse (EMP) effects caused by high-altitude nuclear weapon detonations.
 - 3.13.1.9.11. Ensures CB detection and warning systems are in place.
 - 3.13.1.9.12. Ensures procedures to provide protective clothing and equipment for specialized teams are in place.
 - 3.13.1.9.13. Ensures exposure control procedures are in place.
 - 3.13.1.9.14. Ensures decontamination procedures are in place.
 - 3.13.1.9.15. Coordinates and directs site recovery after attack.
 - 3.13.1.9.16. Coordinates and directs unexploded ordnance (UXO) disposal.
 - 3.13.1.9.17. Provides post-attack damage assessment to CC/BSC.
- 3.13.1.10. The CC may designate the BSC to operate the UCC in his absence. CC may delegate authority to conduct operations to the MCC as appropriate. The level of authority delegated should be specified in the LOP. When the CC is not present in the UCC, all delegated Battle Management Authorities will automatically transfer to the MCC (T-3).
- 3.13.1.11. The UCC will be equipped with appropriate emergency checklists, quick response checklists, and other appropriate documentation needed to respond to emergencies and/or crisis action events (T-3).
- 3.13.1.12. Briefing. During contingency or theater operations, the BSC organizes a Battle Staff briefing for use at appropriate shift change over times. The briefing will cover at a minimum: equipment status, crew status, the flow of the operational mission during the duty period, related safety or emergency information, and other items as designated by the CC (T-3).
- 3.13.1.13. The BSC is the focal point for the operations crew in requesting maintenance or support. The MCC forwards requests to the BSC who will contact the appropriate agency (T-3).
- 3.13.1.14. Equipment Malfunctions. The MCC (or senior crewmember) must approve continued operations of malfunctioning equipment that could potentially affect the

mission (T-3). The MCC will evaluate the impact of using degraded equipment against the mission tasking and the inability to meet that tasking (T-3). MCC will forward requests for maintenance support through the BSC (T-3).

3.13.1.15. Other duties of the Battle Staff are directed by the squadron CC or DO and outlined in the unit's LOP.

3.14. Ops Normal and On-Station Procedures.

3.14.1. Briefings. The duty section heads (SD and ASO/AST) will conduct step positional briefings to their duty sections, providing any last guidance before assumption of duties for the duty shift prior to stepping to the OM's (T-3).

3.14.1.1. Surveillance. The ASO/AST will accomplish a surveillance briefing that will cover surveillance information and contracts applicable to the entire mission (T-3). The ASO/AST may also accomplish a surveillance specialized update briefing prior to assuming station. As a minimum, this briefing will include surveillance areas not covered in previous briefings and any areas needing extra emphasis, such as individual taskings, surveillance contracts, ROE, symbology and tracking, identification plan, and contingency/emergency duties (T-3).

3.14.1.2. Weapons. The SD will accomplish a weapons briefing that will cover weapons information and contracts applicable to the entire mission (T-3). The SD may also accomplish a weapons specialized update briefing prior to assuming station. As a minimum, this briefing will include weapons information not covered in previous briefings and any areas needing extra emphasis, such as individual taskings, weapons contracts, ROE, database updates, mission updates since mission planning day, SPINS changes, and contingency/emergency duties (T-3).

3.14.2. Equipment Checkout. Once equipment is released to the operational crew, crewmembers will begin checkout of equipment utilizing the equipment checkout checklist(s) (T-3).

3.14.2.1. Sensor Management/Procedures. Prior to assuming station, the ASO/AST will perform sensor checks to determine the optimum radar/IFF settings for the mission (T-3). The ASO/AST will brief the MCC/SD on the results of the checks and the final radar setup (T-3). After the EPT completes the radar PREP assessment, the EPT will report to the ASO/AST the status of the radar equipment (radar and IFF), antenna, and other emitter information (T-3). The ASO/AST will report information to the BSC who will enter the single-word assessment word into the Operational Logbook and inform the CC of the radar status (T-3).

3.14.2.2. Database Management. Database management is responsible for an accurate digital display and transfer of battle management data and commands. The database management function maintains the MCS computer, supporting databases, and communications systems. The AST is responsible for the database management function and works with the DST. The DST reports to the AST the status of all equipment (radios, computer, encryption devices, R/R, etc.) prior to Ops Normal call, who in-turn, forwards the status to the Battle Staff (MCC and BSC) (T-3).

3.14.2.3. TDL Management. Data link operations establish and maintain the TDL and Joint Tactical Information Distribution System (JTIDS) or Link 16 networks in support of the J/CFACC. Data link operations are also responsible for the digital display and transfer of battle management data via data link message sets and commands. The CRC digital interface systems contribute to the COP maintained at the AOC (if applicable) and supported by other data link participants. The data link operations section is normally supervised by the AST and manned by the ICT. The ICT inspects the data link equipment and establish links with participants. The ASO/AST will brief the link status to the BS of any links and request maintenance support as required to make the links operational (T-3).

3.14.2.4. Communications Checkout. Once released by the ASO/AST, any crew member assigned a communications function during mission planning will conduct functional checks on the assigned radio and frequency (radio checks) (T-3). Radio checks are preferably done with an external agency but internal checks are acceptable. Unusable radios/frequencies are reported to the ASO/AST who forwards reports as appropriate.

3.14.2.5. Recorder/Reproducer. The R/R equipment will have its time and date checked and be operating prior to control of live aircraft (T-3).

3.14.3. Ops Normal. Most theater or contingency SPINS outline Ops Normal requirements. In the absence of other guidance, Ops Normal will be called to the BSC and HHQ when (T-3):

3.14.3.1. Radar and IFF is operating and correlation checks are complete within acceptable parameters.

3.14.3.2. At least one operational data link (Link 16 or others) is established with participating units.

3.14.3.3. A minimum amount of radios are available to conduct the tasked mission.

3.14.3.4. External communication has been established with the organization exercising Tactical Control (TACON) of the CRC. This communications linkage can be affected either directly from the MCC/SD/ASO/ADAFCO or through the UCC as mission requirements dictates. External communication must also be established with all other agencies/units in which the CRC must have immediate communications to effect mission operations (T-3). For in-garrison operations, the Operations Desk should be contacted immediately.

3.14.3.5. A minimum number of OCUWSs are available to accomplish the mission.

3.14.3.6. The database has been correctly loaded, the computer is stable, and no critical equipment failures are causing system instability.

3.14.3.7. Deviations from Ops Normal. At the discretion of the TACON authority, deviations from Ops Normal can be accepted. Format would be "Ops Normal minus XX", indicating the deviation from the minimums described above.

3.14.4. On Station. Most theater or contingency SPINS outline "On Station" requirements. In the absence of other guidelines, On Station will be called to the BSC and HHQ when (T-3):

3.14.4.1. Ops Normal conditions have been met (deviations noted by TACON authority).

3.14.4.2. Contact and coordination with lateral units has been established.

3.14.4.3. On-coming mission crew has been briefed by previous duty shift and is ready to accept station handover.

3.14.4.3.1. Mission crew is aware of on-going missions, dynamic changes, current and future taskings, and other information necessary to accomplish the mission.

3.14.4.4. Database has been updated with latest information.

3.14.5. Deviations from On-Station. At the discretion of HHQ, deviations from On Station requirements can be accepted. Format would be "On Station minus XX," indicating the deviation from the minimums described above.

3.14.6. LOP and SPINS guidance for Ops Normal and On Station. LOP and SPINS guidance will take precedence over these published minimums when applicable (T-2).

3.15. Weapons Control Procedures. On-station control procedures will be IAW AFI 11-214, ATTP3-1.GP and Joint Pubs subject to additional guidance below (T-0). Use of airspace will be IAW Air Traffic Control Management/Airspace Control Orders (T-0).

3.15.1. Handoff Procedures. Handoff procedures will be IAW applicable letters of agreement (T-3). The SD or a designated WD/AWO will monitor the handoff frequency and/or shout line at all times when performing station assumption duties and while on station (T-3).

3.15.2. Symbolology and Tracking. During all operations, WDs/AWOs will ensure track symbolology and sensor data of controlled aircraft are within 2 NM of each other (T-3). Weapons pairings to Combat Air Patrol (CAP), air-to-air intercept, and ground targets should be accomplished as briefed IAW LOP. Tracking contracts are addressed in the LOP.

3.15.3. Controlled Aircraft Emergency Procedures. For aircraft with in-flight emergencies, the SD performing the handoff will use the word "emergency" at the beginning and end of transmissions to the recovery agency (T-2). In the event of an emergency being declared by an aircraft under CRC control, the controller will refer to their positional check lists, "Controlled Aircraft Emergency Procedures" (T-2).

3.15.4. Control Procedures. All control will be in accordance with AFTTP 3-1.GP, AFI 11-214, fighter brief, and squadron standards/LOP (T-2).

3.15.4.1. A minimum of one controller per side of a controlled fight is required for any live air-to-air training mission.

3.15.4.2. SD Control Procedures. The SD may conduct red air or flight follow control during routine training missions of no greater than 4v4.

3.16. Communications Procedures

3.16.1. Radio Procedures. Adhere to communications discipline at all times. All crewmembers will use proper International Civil Aviation Organization (ICAO) phrases, phonetic alphabet, and R/T procedures outlined in AFTTP 3-1 Atch 1, Brevity (T-2).

3.16.2. Priority of Message Transmissions. CRC crews will transmit messages according to the following priority (T-2):

3.16.2.1. Flight Safety.

3.16.2.2. Command and Control Information.

3.16.3. Callsigns. Always use the aircraft callsign when transmitting messages of flight safety, aircraft movement, and radio calls required by this instruction. Crewmembers use the CRC call sign when communicating with the respective controlling or monitoring agency, aircraft under their control, or as fragged/briefed.

3.16.4. Ultra High Frequency (UHF) Guard Monitoring Procedures. The MCC ensures the mission crew monitors UHF guard frequencies. The MCC, SD, and AWOs/WDs will monitor UHF guard while aircraft are under control (T-2).

3.17. Special Interest Track Procedures. A special interest track is any track that requires priority handling.

3.17.1. MCCs:

3.17.1.1. Ensure the ASO/AST assigns tracking responsibilities for the special interest track.

3.17.1.2. Ensure the SD monitors the special interest track for possible intercept actions.

3.17.2. ASOs/ASTs:

3.17.2.1. Give priority attention to the special interest track and assign it to a ST as a specific responsibility.

3.17.2.2. Ensure the ST logs the time, track number, and ID.

3.17.3. SDs:

3.17.3.1. Coordinate with HHQ.

3.17.3.2. Monitor the progress of the special interest track and conduct any tactical action on the track as directed.

3.17.3.3. Scramble and/or direct aircraft for intercept as directed/necessary.

3.17.3.4. After the accomplishment of the intercept, inform the MCC/ground monitor facility of any required information.

3.17.3.5. Coordinate with the proper ground unit for recovery of the interceptors.

3.18. Off-Station and Post-Duty Shift Responsibilities. The MCC will review and ensure that all appropriate reports and debriefs after the duty shift are completed (T-3).

3.18.1. The MCC or Senior Officer on Duty will ensure that the AF Form 4145, Daily Mission Log is completely filled out at the end of the appropriate duty shift (T-3).

3.18.2. The MCC will conduct a debrief of the duty shift activity with all participants prior to release from the duty day (T-3). All crew members are required to attend unless pre-coordinated with the MCC.

3.18.3. The ASO/AST and SD conduct specialized debriefs with their sections as appropriate.

Chapter 4

BATTLE STAFF DUTIES AND RESPONSIBILITIES

4.1. Battle Staff Overview. Overall Battle Management (BM) is the responsibility of the Battle Staff (BS) under the direction of the commander. The BS is ultimately responsible for execution of the ATO/ACO under the TACON of the Air and Space Operations Center (AOC) through the Chief of Combat Operations (CCO). Supervision of the Mission Crew under the direction of the Commander is normally delegated to the MCC. This paragraph does not apply to FTUs.

4.2. Battle Management (BM) Responsibilities. BM is the allocation or reallocation of assigned assets for operations against the enemy (direct or supporting). BM is accomplished through the coordination and integration of the weapons and surveillance sections. The AOC assigns areas for each BMC2 agency with the ability to perform battle management functions. For each BMC2 agency's assigned area, the BMC2 agency (i.e., AWACS or CRC) provides control, management, and identification/classification of all airborne tracks, defense of friendly assets, and prosecution with assigned weapons of designated targets entering the assigned area, and connectivity with other BMC2 elements. The assigned areas are known as the Battle Management Areas (BMA). The BS and mission crew should expect to be delegated the authority to operate in a decentralized execution mode. This authority may come at any point during mission operations and therefore is a critical planning objective.

4.2.1. Battle Staff. The BS consists of the following positions: CC, normally the unit commander and/or the unit DO and the MCC and Battle Staff Coordinator (BSC). The BS performs the following BM roles and responsibilities:

4.2.1.1. Maintain maximum flexibility, responsiveness, and timeliness in the application of assigned resources.

4.2.1.2. Receive and understand the Joint/Combined Force Air Component Commander's (J/CFACC) guidance and intent.

4.2.1.3. Ensures that the JFACCs plan for CRC operations is executable.

4.2.1.4. Review AOC guidance and directives, monitor status, develop courses of action and implement guidance as directed by the AOC.

4.2.1.5. Review the mission objective and equipment status and provide directions for execution to all operations/support sections.

4.2.1.6. Review the risk management for all phases of the operations.

4.2.1.6.1. Conduct and execute risk assessment and recommend to the TACON authority acceptable levels of risk which affect CRC execution of the mission.

4.2.1.7. Ensure situational awareness between the BS and mission crew for all tactical action decisions arising from external agencies.

4.2.1.8. Prepare and brief a logical and responsive change of command and/or succession of duties for any position or personnel that may be lost for any reason.

4.3. Commander (CC), (AFSC 13B3D) (Maj – Lt Col on G-series orders). The unit CC ensures facilitation, planning, direction, coordination, and control of support activities of the

unit's subordinate mission support sections. During tactical execution, the CRC is operationally subordinate to the AOC Chief of Combat Operations, and the CRC commander is responsible for implementing BMC2. The authority to execute operational control of weapons system (to include friendly fighters and surface-to-air missiles [SAMs] and air defense artillery [ADA] units) may be decentralized to the CRC Commander by the AOC, who in-turn may delegate decentralized execution to the MCC. The CC is responsible for the management and direction of tactical level BMC2 to include air defense and airspace control activities within the assigned area.

4.3.1. The unit CC works from the Unit Command Center (UCC) with the BSC, providing the necessary information required to direct CRC activities. The BSC coordinates with the CRC mission crew to obtain the required information and pass CC decisions, as required.

4.3.2. The unit CC and DO will be Air Force/Air National Guard (ANG) field grade officers having, or in the process of obtaining, the 13B3D Air Force Specialty Code (AFSC) (T-2). This requirement is non-waiverable. Those not possessing the AFSC must be scheduled to attend the ABM course at Tyndall AFB, FL prior to performing CC or DO duties (T-2). The CRC CC and DO will perform the Battle Staff duties (T-3). CRC CCs and DOs will be required to qualify as MCCs and meet the training and positional requirements outlined in AFI 13-1 CRC Vol. 1 for the MCC crew position (T-3). No additional commanders are authorized; there need not be a dedicated Flight Commander specific to each operational crew.

4.3.3. The CC is responsible for:

4.3.3.1. Implementing BMC2 through employment of the control elements of the CRC within the TACS.

4.3.3.2. Operational control of weapons systems (to include friendly fighters and surface-to-air missiles (SAM) if delegated to the CRC CC. The CC is responsible for the management and direction of the air defense and airspace control activities within the assigned operations area. The Area Air Defense Commander (AADC) may appoint the CC to be the Region or Sector Air Defense Commander (RADC/SADC)

4.3.3.3. Obtain the necessary guidance from the AOC to direct CRC operations in support of Air Operations Directive (AOD).

4.3.3.4. Communicate with the CRC mission crew commander to obtain the information and pass decisions, as required.

4.3.3.5. Directing the BS (BSC/MCC) to:

4.3.3.5.1. Identify air traffic within the assigned operations area IAW theater directives.

4.3.3.5.2. Assign offensive and defensive missions IAW theater ROE.

4.3.3.5.3. Commit allocated weapons to counter the hostile threat IAW theater ROE.

4.3.3.5.4. Determine alert status and disseminate this information for all air defense systems under operational control.

4.3.3.5.5. Ensure accurate and timely air situation data, theater action results (e.g., Situation Reports [SITREP]), equipment, and weapons status reports are provided to the AOC.

4.3.3.5.6. Provide pre/post-mission briefings.

4.3.3.5.7. Prepare and submit daily status reports of the CRC operations and maintenance activities as directed by AOC.

4.3.3.5.8. Ensure mission completion IAW HHQ.

4.3.3.5.9. Monitor CRC ability to conduct assigned mission and address and report (if required) LIMFACs.

4.3.3.5.10. Ensure compliance with applicable AF/local operating instructions.

4.3.3.5.11. Supervise UCC activities for effective command and control of the organization.

4.3.3.5.12. Identify UCC manning requirements based on mission/threat.

4.3.3.5.13. Determine site response to local warnings, security threats, and alarm conditions.

4.3.3.5.14. Ensure operational and logistics requirements are met.

4.4. Battle Staff Coordinator (BSC) , *AFSC 1C500, 1C591/71* (MSgt – CMSgt), SEI 949. The BSC is the direct link between the UCC and the mission crews, and is responsible to the CC in the management and direction of the air defense and airspace control activities within the assigned area.

4.4.1. The BSC works from the UCC, providing the necessary information required to direct CRC activities. The BSC coordinates with the mission crew to obtain the required information and pass CC decisions, as required.

4.4.2. BSCs:

4.4.2.1. Provide the CC current operational information. Review and advise the CC on the unit's SORTS report outlining the unit's capability to accomplish the tasked mission. Provide operations data required for the CC's SITREP and any other required reports. Prepare OPREPs, SITREPs, and Emergency Action Messages as required.

4.4.2.2. Under the direction of the CC, manage the UCC and the flow of information between the OM and the UCC. Manage the UCC facility and ensure the UCC can meet all administrative functions, and serve as coordinator between the mission crew, maintenance, and support agencies.

4.4.2.3. Manage the operation of the automated data processing (ADP) systems and extract applicable message traffic products.

4.4.2.4. Ensure all necessary administrative equipment and supplies are available for battle staff and crew activities.

4.4.2.5. Coordinate equipment problems/outages with the Maintenance Operations Center (MOC). Obtain Job Control Numbers (JCN) from MOC. Track estimated time of return to operation (ETRO) status and advise the MCC/SD and ASO/AST on the

operational impact of outages. Maintain the Operations Logbook and record information on significant events during each crew shift IAW [Chapter 8](#).

4.4.2.6. Provide weather information to operations crew members when required. Ensure the EPT is provided with current weather to update RADAR parameters.

4.4.2.7. Ensure mission crew is aware of site configurations and pertinent information (LERTCON status, Mission-Oriented Protective Posture (MOPP) levels, etc.)

4.4.2.8. Extract, validate and disseminate alert status and information to air defense systems under operational control of the CRC.

4.4.2.9. Provide assistance to the MCC as necessary to support the mission. Coordinate with the MCC to ensure the most current operations information is available in the UCC. Maintain current operational status of applicable ADA assets [SAM Short Range Air Defense (SHORAD) Tactical Order (SSTO)] and ensure the MCC is briefed.

4.4.2.10. Consolidate information from operations, maintenance, and support sections. Update operations on support status as it affects the mission.

4.4.2.11. In coordination with the remainder of the BS, ensure all crew members have signed off the OIF prior to step time.

4.4.2.12. Complete the AF Form 4145, *Daily Activity Log*, at the end of the shift as directed by the MCC and/or a spread sheet account of daily mission activities (typically for contingency operations).

4.4.2.13. Implement unit level emergency procedures IAW checklists. Track checklist completion of the mission crew and report status to CC as appropriate.

4.4.2.14. Complete additional reports and follow additional reporting and briefing responsibilities as directed by the MCC and CC. Attend the crew debrief as able. In the absence of a Mission Planning Cell Chief, document lessons learned for handover to subsequent crews.

4.5. Mission Crew Commander (MCC), (AFSC 13B3D) (Maj - Lt Col). The MCC is responsible to the CC for the overall supervision, mission crew performance and direction of tactical level BMC2 to include air defense and airspace control activities within the assigned area. As the OIC, the MCC supervises the weapons and surveillance functions to ensure safe and effective mission accomplishment. The authority to execute tactical control of weapons system (to include friendly fighters and SAM and ADA units) may be delegated to the CRC CC who in-turn may delegate decentralized execution to the MCC.

4.5.1. The MCC will perform duties from the OM, directly supervising the conduct of operations (T-3).

4.5.1.1. During daily operations in-garrison, the MCC/SRO participates in crew operations and may delegate supervision of the crew to the SRO on the operational crew. The MCC is still considered part of the duty crew, and will sign the AF Form 4145 at the end of the day's duty shift validating crew training (T-3).

4.5.1.2. At a minimum, the MCC should have access to a dedicated communication link with HHQ (i.e., AOC) and the UCC to conduct coordination for BMC2 execution.

4.5.2. MCCs:

4.5.2.1. Know and employ administrative and duty position related applications of operational products during deployment, employment, and redeployment phases of any operation.

4.5.2.2. Ensure equipment is prepared, ready, and operating to meet mission requirements.

4.5.2.2.1. Obtain and assess equipment status and determine operational impact, if any. Ensure all outages affecting mission accomplishment are reported to the BSC. Direct/approve scheduled and unscheduled maintenance on equipment with the BSC.

4.5.2.2.2. Ensure mission crew has the sensors necessary to accomplish mission objectives.

4.5.2.2.3. Ensure mission crew has the communications necessary to accomplish mission objectives. Ensure OM communications equipment is configured and cryptographic radio equipment loaded to meet mission requirements.

4.5.2.2.4. Ensure data link configuration is IAW OPTASKLINK and AFTTP 3-1 GP.

4.5.2.2.5. Ensure database is loaded and configured to meet mission tasking. Direct DST to enter/make changes to operational database to ensure proper display of operationally-relevant data.

4.5.2.3. Exercise engagement authority and/or operational control of weapon systems (to include friendly fighters, SAMs, and ADA units) as authorized by the Senior Offensive Duty Officer (SODO), Senior Air Defense Officer (SADO) or the Defensive Duty Officer (DDO). The decision to delegate is normally reached once the Chief of Combat Operations (CCO), SADO, and senior ADA Liaison Officer believes air defense situation awareness in the AOC is insufficient to make engagement decisions.

4.5.2.3.1. The AOC may delegate engagement authority and/or operational control to the CRC. The MCC only assumes engagement authority and operational control once the CC delegates that authority to the MCC.

4.5.2.3.2. When delegated, MCC may further delegate authorities (ID, engage, scramble) to the SD/ASO, as necessary.

4.5.2.3.3. Upon direction from the AOC, the MCC releases operational control or engagement authority back to the CC, who returns authority/operational control to the AOC.

4.5.2.4. Coordinate with higher, lateral, and subordinate BMC2 agencies to conduct operations consistent with ROE, SPINS, and execute the ATO.

4.5.2.4.1. Coordinate with the SODO/SADO/DDO for BM execution. Request/accept delegation of ID authority, engagement authority, and operational control of aircraft as situation demands. Update SODO/SADO/DDO of ATO deviations/solutions and request additional support assets as required.

4.5.2.4.2. Provide oncoming airborne BMC2 (e.g., Hawkeye, JSTARS, and AWACS) assets an "on-station" briefing IAW theater directives.

4.5.2.4.3. Coordinate the unit's operations interface and coordination requirements with other TACS elements and services. Coordinate unit configuration changes as necessary. Disseminate air defense warnings to lateral and/or subordinate units as required.

4.5.2.5. Plan and direct mission crew emergency actions and response procedures IAW operations checklists and crew aids (e.g., fire, alarm conditions, MOPP level changes, ground attacks, ARM attack). Report completion of checklists to BSC as necessary. Direct mission crew actions during quick reaction situations (e.g., EMERGCON, Air Defense Warning, FPCON) IAW checklists.

4.5.2.6. Employ assigned resources to support execution of the ACO/ATO during contingencies or deployments.

4.5.2.6.1. Exercise control of assigned offensive and defensive missions IAW theater ROE. The MCC executes the initial allocation of resources (aircraft/ADA) to counter the threat IAW theater ROE. The MCC directs CRC execution of assigned taskings and procedures outlined in the ATO, ACO, ROE, and ID.

4.5.2.6.2. Control and manage airspace and OPCON/TACON of weapon systems(when delegated).

4.5.2.7. Supervise weapons and surveillance sections.

4.5.2.7.1. Ensure mission crew is briefed on all aspects of the mission. Provide/update threat information to the crew.

4.5.2.7.2. Supervise allocation of resources to counter the threat and accomplish the mission objectives. Direct/assist the SD with weapons/target pairings. Ensure engagement tactics are commensurate with threat assessment and ROE. Assist the SD in managing CRC-assigned CAS resources and efforts.

4.5.2.7.3. Monitor the detection, tracking, and identification of air traffic within the CRC's Battle Management Area (BMA).

4.5.2.7.4. Ensure CRC and any assigned subordinate units maintain accurate air situation data.

4.5.2.7.5. Monitor overall air operations for safety.

4.5.2.7.6. Direct the scramble/divert of aircraft.

4.5.2.7.7. Ensure mission crew assistance is provided to aircraft experiencing emergency situations IAW operations crew aids. Monitor mission crew actions in response to aircraft emergencies. Monitor and direct combat search and rescue (CSAR) and search and rescue (SAR) efforts as tasked.

4.5.2.8. In coordination with the SD, direct and integrate ADA operations.

4.5.2.8.1. Obtain ADA status from the assigned ADAFCO. When delegated, direct appropriate ADA weapons alert status through the assigned ADAFCO.

4.5.2.8.2. Monitor the Air Defense Command and Control Net (ADCCN) as necessary.

4.5.2.9. With the ASO/AST, manage the Combat Identification (CID) process and disseminate the air picture within the assigned area.

4.5.2.9.1. Assess ROE and ID procedures when transitioning from peace to war.

4.5.2.9.2. Coordinate with the AOC for identification of aircraft not normally identifiable by the standard identification matrix.

4.5.2.9.3. Coordinate with the AOC for declaration of hostiles based on ROE while ID authority rests with the AOC.

4.5.2.9.4. When delegated by the AOC, the MCC only declares targets as hostile based on ROE.

4.5.2.10. Direct mission crew actions during an Anti-Radiation Missile (ARM) attack IAW operations checklist. Manage mission crew EP efforts to counter electronic attack (EA).

4.5.2.10.1. Coordinate ARM attack warning with the UCC.

4.5.2.10.2. Monitor ARM decoy employment and EP actions to counter an ARM attack.

4.5.2.10.3. Direct the ASO/AST and EPT to change (emission control) (EMCON) based on the EMCON plan.

4.5.2.11. Recognize and counter various types of communications jamming, as needed.

4.5.2.12. Prepare and conduct a positional changeover briefing with the oncoming MCC IAW the positional changeover briefing guide and unit checklists as applicable.

4.5.2.13. Conduct mission crew debriefing, determine mission crew accomplishments relative to briefed mission objectives, including lessons learned. As able, pass lessons learned to MPC Chief.

4.5.2.14. Direct the submission of AF Form 4145, *Daily Activity Log*, at the end of the shift.

Chapter 5

WEAPONS

5.1. Weapons Overview. The Weapons section conducts the weapons control function and, under the supervision of the MCC, some TDL management, combat airspace control and battle management functions. The Senior Director (SD) leads Weapons and directs their activities. The SD supervises the Air Weapons Officers (AWO) and Weapons Directors (WD) who perform the weapons control and battle management functional duties. When assigned, an Air Defense Artillery Fire Control Officer (ADAFCO) is considered part of the Weapons section.

5.1.1. The weapons section at the FTU is incorporated in locally established procedures and uses this section as a reference for daily operations and training in congruence with the rest of the document.

5.2. Weapons Control Responsibilities. Weapons control is the control of offensive and defensive counter air (OCA/DCA), air refueling (AR) missions, dynamic targeting (DT), coordination of, combat search and rescue (CSAR) operations, reconnaissance, airlift, electronic attack (EA), special operations, emergency aircraft assistance, and direction of ADA Systems. The weapons section is responsible for managing and employing the assigned weapons systems IAW governing OPORD, ATO/ACO, SPINS and/or other theater directives. It requires a thorough knowledge of friendly and enemy system capabilities and an understanding of doctrine for the correct and proper application of force at the decisive time and place.

5.2.1. The Weapons section are subject matter experts in the areas of ROE, theater SPINS, area familiarization, and are intimately familiar with the documents listed in Appendix 6, Section A.6.2.

5.2.2. Weapons control also involves the control of non-kinetic applications of force, such as electronic warfare (EW), tactical reconnaissance (tac recce), show of force (SOF) and show of presence (SOP), etc.

5.3. Tactical Data Link (TDL) Management. Data link management is the digital display and transfer of battle management data and commands. It includes operation of the MCE computer, communications systems, and MCE supporting databases. In the Weapons section, it involves the use of data link messages to provide surveillance, targeting, and C2 orders through the digital interface to provide maximum situational awareness with a limited amount of verbal communication. Weapons operators should be proficient in the use of weapons specific link control functions.

5.4. Combat Airspace Management Responsibilities. Airspace management is the implementation of the ACO while providing safe passage advisories to airborne assets within the AOR. The Weapons section is familiar with ACO elements to include tanker anchors, transit boulevards, air routes, and other ACM to safely and efficiently route aircraft through the AOR in route to their designated working areas. These ACMs may be required to be created dynamically with the use of Restricted Operating Zones (ROZ), High Density Air Control Zones (HIDACZ), Missile Engagement Zones (MEZ), and so on, and requires flexibility and attention to detail to manage.

5.5. Battle Management (BM) Responsibilities. Battle Management is the allocation or reallocation of assigned assets for operations against the enemy (direct or supporting). The Weapons section exercises battle management by adjusting and managing tanker flow, routing tactical and strategic airlift through working areas, performing DT from on-call assets, and providing recommendations to HHQ on the application of correct assets to dynamic tasks as the ATO cycle progresses.

5.6. Senior Director (SD), AFSC 13B3D, (1Lt - Maj). The SD is responsible to the MCC for the assignment of allocated weapons and for coordinating and directing WD and ADAFCO activities. The SD evaluates the air defense threat situation and makes recommendations to the MCC to counter this threat.

5.6.1. The SD conducts his activities from the OM. When necessary due to system limitations, the SD does not require a dedicated OCUWS, but must have access to radios and other communications necessary to perform battle management and weapons control activities (T-3). If performing weapons control, the SD requires a dedicated OCUWS.

5.6.2. During in-garrison training missions, a Senior Weapons Director (SWD) may serve in place of the SD, see Section [5.8.2](#).

5.6.3. SDs:

5.6.3.1. Know the significant characteristics and capabilities of friendly, hostile, and neutral air defense systems to include aircraft, SAMs, ADA, and any other type weapon systems that could be encountered during an assigned contingency operation.

5.6.3.2. Conduct weapons portion of the crew briefing and debriefing, determine weapons section accomplishments relative to briefed mission objectives, including lessons learned.

5.6.3.2.1. Determine weapons section accomplishments relative to briefed mission objectives, including lessons learned. Ensure WDs/AWOs prepare and participate in briefing/debriefing IAW AFI 11-214.

5.6.3.2.2. Assign weapons teams' (WD/AWO and ADAFCO) missions and responsibilities.

5.6.3.2.3. Ensure weapons section communications equipment is configured and cryptographic radio equipment is loaded to meet mission requirements.

5.6.3.3. Assign radio frequencies to meet mission requirements.

5.6.3.3.1. Monitor the Air Defense Command and Control Net (ADCCN), Command and Control Coordination (C2 Coord), SATCOM, and other BMC2 frequencies as required.

5.6.3.3.2. Monitor weapons control frequencies as required to maintain flight safety and ensure mission accomplishment.

5.6.3.3.3. Ensure the weapons team has sensor data to accomplish mission requirements.

5.6.3.3.4. Supervise/direct weapons section operations/control of assigned missions.

5.6.3.3.4.1. Direct weapons team efforts during all weapons control and battle

management operations.

5.6.3.3.4.2. Monitor and direct weapons teams' support for Kill Box Operations.

5.6.3.4. Direct weapons team actions during emergency situations (e.g., fire, alarm conditions, MOPP level changes, ground attacks, ARM attack) IAW checklists. Direct weapons team actions during quick reaction situations (e.g., EMERGCON, Air Defense Warning, FPCON) IAW checklists. Provide and update threat information to the weapons team.

5.6.3.5. Coordinate with the ASOC to manage CAS operations. Deconflict aircraft in AOR from Joint Fires as required.

5.6.3.6. Conduct airspace management duties to ensure flight safety of aircraft operating in the AOR. Coordinate and/or establish CAP and ATC hand-over/recovery points, as required. Establish dynamic Airspace Control Measures as required. Supervise activation and deactivation of ACMs.

5.6.3.6.1. Control aircraft; know procedures and plans IAW AFTTP 3-1.GP and AFI11-214.

5.6.3.6.2. OCA (surface attack, fighter sweep, escort, suppression of enemy air defenses (SEAD))

5.6.3.6.3. DCA (area/point defense, self defense, HVAA protection)

5.6.3.6.4. Close air support (CAS) support aircraft.

5.6.3.6.5. Know the procedures for counterland missions (CAS, AI)

5.6.3.7. Monitor the Air Force Air Request Net (AFARN)/Joint Air Request Net (JARN) process immediate air requests and direct weapons teams in the control of CAS missions.

5.6.3.7.1. Manage CAS operations.

5.6.3.7.1.1. Review priority of fire.

5.6.3.7.1.2. Review target priorities.

5.6.3.7.2. Know procedures for the control of CAS support aircraft.

5.6.3.7.3. Coordinate the scramble of CAS and forward air controller (airborne) [FAC(A)] aircraft as necessary.

5.6.3.7.4. Ensure processing of immediate air requests.

5.6.3.8. Ensure WDs/AWOs are aware of existing and forecasted weather conditions for the AOI/AOR and recovery bases.

5.6.3.9. Provide weapons related adaptations, changes, and essential information to the DST through the ASO/AST, for entry into the database.

5.6.3.10. Coordinate with the MCC/ASO or AST for system and surveillance changes (e.g., AOI/track-of-interest (TOI)/named area-of-interest (NAI)/track ID/classification).

5.6.3.11. Review OPLAN/OPORD, ATO, ACO, ACP, OPTASKLINK, SPINS, ROE, TACOPDAT, TMD Plan, Annex K, and other mission-specific documents.

- 5.6.3.12. Review documents applicable to the mission (e.g., SPINS, ROE, ATO/ACO, lessons learned, aeronautical charts).
- 5.6.3.13. Complete required weapons documentation.
- 5.6.3.14. Direct the weapons section from full through degraded operations.
- 5.6.3.15. Disseminate theater ballistic missile (TBM) warnings as required.
- 5.6.3.16. Ensure weapons teams control assigned missions to the level required.
- 5.6.3.17. Ensure WDs prepare and participate (when able) in briefing/debriefing with the aircrew IAW AFI 11-214, Attachments 2 and 3.
- 5.6.3.18. Monitor WD responses to aircraft emergencies IAW emergency checklists and assist when necessary.
- 5.6.3.19. Direct weapons team efforts during CSAR/SAR operations.
- 5.6.3.20. Direct employment of weapons resources.
 - 5.6.3.20.1. Scramble/divert alert aircraft when delegated.
 - 5.6.3.20.2. Manage air refueling assets and AOR fuel requirements.
- 5.6.3.21. Engage air defense weapons systems IAW theater ROE (when delegated the authority)
 - 5.6.3.21.1. Coordinate airborne orders and scramble fighters, as required/directed (when delegated the authority)
- 5.6.3.22. Provide and update threat information to the weapons team.
- 5.6.3.23. Recognize and counter communications/electronic jamming.
 - 5.6.3.23.1. Authenticate voice transmissions with applicable authenticators.
- 5.6.3.24. Recommend threat mode system changes to the MCC.
- 5.6.3.25. Direct the ADAFCO to coordinate with the Fire Direction Center (FDC) for target assignment. Report changes to the SAM/ADA weapons status to the MCC. Direct changes to the SAM/ADA weapons status, when delegated.
- 5.6.3.26. Report changes to the SAM/ADA weapons status to the MCC.
 - 5.6.3.26.1. Direct changes to the SAM/ADA weapons status, when delegated.
- 5.6.3.27. Prepare and conduct a positional changeover briefing with the oncoming SD prior to departing position IAW the positional changeover briefing guide and unit checklists, if applicable.
- 5.6.3.28. Ensure weapons teams complete the AF Form 4146, *Mission Briefing Guide* for each mission (if applicable). Document contingency operations, report the total number of aircraft sorties, and air refuelings on any common spread-sheet product (e.g., Microsoft Excel).

5.7. Air Defense Artillery Fire Control Officer (ADAFCO), 1Lt-Capt, (US Army/US Marine Corps). The ADAFCO is an US Army or Marine Liaison officer who serves as the single

interface point between the FDC/ICC and the CRC. The ADAFCO is responsible to the SD for the employment of ADA assets in defense of friendly sites.

5.7.1. The ADAFCO is located at the CRC for the appropriate battery and is provided with communications links back to the FDC to coordinate fires and direct targeting.

5.7.2. ADAFCOs:

5.7.2.1. Monitor and report current status/changes of assigned ADA systems to the SD.

5.7.2.2. Report all Defended Asset List (DAL) changes and proposed DAL changes to appropriate agencies. Receive and update all brigade/battalion level reports (Surface to Air Missile Report [SAMSTATREP], Engagement Summary Reports, etc.)

5.7.2.3. Provide MPC communications/equipment requirements during mission planning phase.

5.7.2.4. Understand actions taken during changes in quick reaction situations (e.g., EMERGCN, Air Defense Warning, FPCN).

5.7.2.5. Understand theater ADA weapons capabilities.

5.7.2.6. Transmit appropriate weapons commands to the (FDC/ICC) to ensure effective employment of ADA and air defense resources when directed by the SD. Coordinate directly with the ICC for target assignment. Conduct close coordination with the SD/WD/AWO on all ADA engagements to avoid simultaneous engagements and fratricide.

5.7.2.7. The ADAFCO monitors engagements of aircraft and TBMs and informs the MCC/SD of results of weapons engagement, to include the number of targets engaged/number of targets remaining.

5.7.2.8. Disseminate air defense warnings, weapons alert status and other operational control data to and from the FDC/ICC, when directed by the SD.

5.7.2.9. Coordinate with the ASO/AST to establish critical tracks reported by Fire Units (FU) that are not reported by the FDC/ICC via data link. Query the ASO/AST on all inbound unidentified tracks and recommend identifications as received from ADA sources.

5.7.2.10. Maintain Operations Log (US Army Form 1594) Review Log entries following each shift; summarize events for After Action Report incorporating all comments from crewmembers and other ADAFCOs.

5.7.2.11. Serve as Air Defense advisor to joint and coalition forces.

5.7.2.12. Accomplish the following TBM Alert Procedures:

5.7.2.12.1. Monitor voice/data circuits and displays to ensure 100% connectivity.

5.7.2.12.2. Verify all subordinate/adjacent units have alert notification.

5.7.2.12.3. Update SAM/SHORAD Tactical Order (SSTO) to reflect TBM alert, ensure subordinate fire units are at proper alert state.

5.7.2.12.4. Pass subsequent amplifying data to subordinate/adjacent units as applicable; possible launch location, impact point, type of threat expected (NBC info).

5.7.2.13. Accomplish the following TBM launch procedures:

5.7.2.13.1. Monitor voice/data circuits and displays to ensure 100% connectivity.

5.7.2.13.2. Verify all subordinate/adjacent units have launch notification information:

5.7.2.13.2.1. Launch date/time

5.7.2.13.2.2. Azimuth

5.7.2.13.2.3. TBM Type and number

5.7.2.13.2.4. Projected point of impact

5.7.2.13.2.5. NBC threat (Yes, No, Unknown)

5.7.2.13.2.6. If impact area is in vicinity of the CRC, notify MCC/SD, and don protective gear.

5.7.2.13.3. Update SСТО, when feasible, only up-order the affected units to facilitate proper EMCON procedures.

5.7.2.13.4. Receive and record engagement summary report NLT 30 minutes after final engagement.

5.7.2.13.5. Re-assess the current situation as the tactical situation permits, and issue new SСТО as required.

5.8. Weapons Director (WD), AFSC 1C5/5/71D, (A1C – MSgt), or Air Weapons Officer (AWO), AFSC 13B3B, (2Lt – Capt), SEI 948. The WD/AWO is responsible to the SD for the control of aircraft within the CRC's BMA. The WD/AWO must be CMR in offensive and defensive counter air (OCA/DCA), AR, CAS, AI and CSAR consistent with briefed objectives (T-3).

5.8.1. The WD/AWO will conduct operations from the operations module (T-3).

5.8.2. Senior Weapons Director (SWD). During routine in-garrison training missions, an IWD or IAWO may serve as the Senior Weapons Director (SWD) in lieu of an SD under the following conditions:

5.8.2.1. The SWD must be at least a Technical Sergeant (TSgt) in rank. (T-3).

5.8.2.2. The activity to be controlled does not involve simultaneous activity or a largeforce exercise.

5.8.2.3. The DO will authorize by letter the individuals to perform as SWDs, filed in the unit's OIF (T-3). The SWD performs those duties ordinarily performed by an SD.

5.8.3. WDs/AWOs:

5.8.3.1. Know the significant characteristics and capabilities of friendly, hostile, and neutral air defense systems to include aircraft, SAMs, ADA, and any other type weapon systems that could be encountered during an assigned contingency operation.

5.8.3.2. Extract information from mission planning documents required to plan and execute the tasked mission IAW [Attachment 6](#), Section [A6.2](#). Participate in and extract pertinent information from the aircrew mission brief IAW AFI 11-214.

5.8.3.3. Extract weapons-related database input information as directed and provide to the DST through the SD.

5.8.3.4. Know airspace management requirements and procedures. Take immediate action to maintain flight safety and to avoid fratricide. Recognize and provide assistance for aircraft emergencies IAW applicable checklist.

5.8.3.5. Perform weapons team actions during emergency situations (e.g., fire, alarm conditions, MOPP level changes, ground attacks, ARM attack) IAW checklists. Perform weapons team actions during quick reaction situations (e.g., EMERGCON, Air Defense Warning, FPCON) IAW checklists.

5.8.3.6. Know procedures and requirements to positively identify and assume control of aircraft. Know procedures and the plan for counter air missions (offensive and defensive). Know the CSAR/SAR mission and the elements involved.

5.8.3.7. Know the basic capabilities, limitations, characteristics, and requirements of operational data links.

5.8.3.8. Control aircraft and know the procedures, provide flight following services.

5.8.3.8.1. OCA (surface attack, fighter sweep, escort, SEAD)

5.8.3.8.2. DCA (area/point defense, self defense, HVAA protection)

5.8.3.8.3. CAS

5.8.3.8.3.1. Know the procedures for counterland missions (CAS, AI)

5.8.3.8.3.1.1. Know how to complete and use the CAS Briefing Form (9-line) AFTTP (1) 3-2.6, J-FIRE and AFTTP 3-2.6.

5.8.3.8.3.1.2. Pass tasking and threat updates to the FAC-A and CAS aircraft on the control frequency.

5.8.3.9. Keep the SD informed of all changes to mission requirements, results, and situations affecting mission completion or flight safety.

5.8.3.10. Forward BDA or In-flight reports (IFR) to the SD.

5.8.3.11. Inform aircrews/flight leads of information that may affect mission accomplishment.

5.8.3.12. Ensure assigned radios are powered and correct frequencies are set in radios.

5.8.3.13. Obtain current and forecasted weather for areas of interest or as requested.

5.8.3.14. Obtain current weather observations as required.

5.8.3.15. Obtain pilot reported (PIREP) observations (as required) and pass to the SD.

5.8.3.16. Manage and control aircraft in distress IAW positional checklist.

- 5.8.3.17. Know and use operational brevity terms and codewords, proper radio/telephone (R/T) techniques, and communications discipline IAW AFTTP 3-1 General Planning (GP), AFJPAM 10-228, Multi-Service Air-Air, Air-Surface, Surface-Air Brevity Codes, ACP 121 US Sup-2, Communications Instructions General, and ACP 125, Communication Instructions - Radio Telephone Procedures.
- 5.8.3.18. Keep the SD informed of all changes to mission requirements, results, and situations affecting mission completion or flight safety.
- 5.8.3.19. Use authenticators as required.
- 5.8.3.20. As directed, monitor the Air Force Air Request Net (AFARN)/Joint Air Request Net (JARN) and process immediate air requests as directed/coordinated through the SD.
- 5.8.3.21. Notify CAS aircraft of other manned and unmanned aircraft working immediate air request targets within the same vicinity.
- 5.8.3.22. Complete DD Form 1972, Immediate Air Request and forward to the SD.
- 5.8.3.23. Manage and control aerial refueling assets as required.
- 5.8.3.24. Manage and control check-in, force marshaling/recovery of assets.
- 5.8.3.25. Know the CSAR/SAR mission and the elements involved.
- 5.8.3.26. Provide support to CSAR and Special Operations missions
- 5.8.3.27. Recognize and counter communications jamming.
- 5.8.3.28. Interpret and respond to data link orders.
- 5.8.3.29. Complete AF Form 4146, Mission Briefing Guide, and forward to the SD.
- 5.8.3.30. Complete weapons documentation for each duty shift as directed by the SD (see [Chapter 8](#)).
- 5.8.3.31. Setup the OCUWS and VCAS IAW positional checklists.
- 5.8.3.32. Operate the OCUWS and VCAS to meet mission requirements.
- 5.8.3.33. Determine and/or convert coordinates on maps using different reference systems, (i.e., Geographical Reference (GEOREF), Bearing/Range, Universal Transverse Mercator (UTM), Latitude/Longitude (lat/long).
- 5.8.3.34. Read and initial all items in the read file and operations information files (OIF).
- 5.8.3.35. Conduct positional changeover brief with relieving WD using positional changeover briefing guide and unit checklists, as applicable.
- 5.8.3.36. Prepare for and participate in a debriefing with the aircrew IAW AFI 11-214 and unit procedures.
- 5.8.3.37. Attend the crew mission briefing/debriefing.
- 5.8.3.38. Know type and use of airspace control measures.
- 5.8.3.39. Know procedures for and control DT missions.

5.8.3.40. Execute the ATO IAW J/CFACC intent.

Chapter 6

SURVEILLANCE DUTIES AND RESPONSIBILITIES

6.1. Surveillance Overview. The Surveillance section conducts the surveillance and the tactical data link (TDL) management operations and, under the supervision of the MCC, some airspace control and battle management functions. The ASO leads the surveillance section and directs their activities. The Surveillance section at the FTU is incorporated in locally established procedures and uses this section as reference for daily operations and training.

6.1.1. As the section most intimately involved with the employment and use of the equipment, the ASO is responsible to the MCC for the reporting and tracking of equipment status and coordinating with the BSC during outages or interruptions.

6.1.2. Several duty positions involved with the operation and employment of CRC equipment are assigned to the Surveillance section: AST, DST, ICT, EPT, and the ST.

6.2. Surveillance Responsibilities. The Surveillance section performs the surveillance function: the detection, tracking, identification, and reporting of airborne entities within the CRC's assigned operational area, region or sector. Tracking, ID and reporting procedures are determined by the J/CFACC for the theater and outlined in the appropriate theater OPLAN/OPORD.

6.2.1. The ASO divides the CRC operational area into sub-areas and assigns an ST to conduct surveillance within that airspace.

6.2.2. Tracks not easily identifiable by the published SPINS and ID plan are referred to the MCC by the ASO for action by HHQ, typically the AOC.

6.3. Tactical Data Link (TDL) Management. The data link management is the digital display and transfer of battle management data and commands. It includes operation of the Modular Control Equipment (MCE) computer, communications systems, and MCE supporting databases. Data link management also consolidates sensor inputs into a recognizable air picture for distribution over TDL and forwards that picture to the AOC and/or adjacent C2 agencies. The data link management function can be divided into two main responsibilities:

6.3.1. **Database Management.** Database management is the loading, editing, and display of operations-area relevant points, tracks, and geometry corresponding to active Airspace Control Measures (ACM) IAW the published ACO. Database management is primarily performed by the DST. Additionally, the DST acts as the first contact for reporting and troubleshooting of any equipment failures, including radios, Operator Console Unit Work Stations (OCUWS), and the Recorder Unit (RU).

6.3.2. **TDL Management.** TDL Management is the reception (from organic AN/TPS-75 detection and additional external sensors), processing, and forwarding of the CRC recognizable air picture (RAP) to the AOC and other BMC2 nodes to include lateral joint agencies. TDL Management is primarily performed by the ICT under the supervision of the ASO.

6.4. Electronic Protection Technician (EPT). The EPT is responsible for implementing appropriate EP actions through the use of the AN/TPS-75 RADAR system displays and switch

actions to ensure optimal performance of the RADAR(s). The EPT section develops the EMCON plan during mission planning and recommends changes as appropriate.

6.5. Combat Airspace Management Responsibilities. Airspace management is the implementation of the ACO while providing safe passage advisories to airborne assets. The Surveillance section ensures active ACMs are properly displayed and coordinates the activation and deactivation of ACMs with the SD and MCC. The Surveillance section is aware of ACMs involved in the identification process such as known enemy airspaces (point of origin [POO] criteria), minimum risk routes (MRR), safe passage routes, etc.

6.6. Battle Management (BM) Responsibilities. Battle management is the allocation or reallocation of assigned assets for operations against the enemy (direct or supporting). The Surveillance section is aware of basic BM information to include friendly air routes, identification of friendly airbases, basic capabilities and limitations of aircraft to provide elements of the identification plan (to include ISR assets such as Rivet Joint).

6.7. Air Surveillance Officer (ASO) AFSC 13B3D (1Lt - Major). The ASO is responsible to the MCC for surveillance, airspace, and data link functions. The ASO coordinates with the SD to ensure RAP accuracy and distribution over the TDL network.

6.7.1. The ASO will perform duties from the OM (T-3).

6.7.2. The ASO may delegate authority for supervision of the surveillance section to the AST.

6.7.3. ASOs:

6.7.3.1. Review all applicable mission-specific documents.

6.7.3.2. Ensure that the surveillance section is briefed on the current mission, and is familiar with mission planning documents outlined in [Attachment 6](#), section [A6.2](#).

6.7.3.3. Supervise the timely and accurate collection, display, identification, and dissemination of air surveillance data.

6.7.3.4. Ensure air surveillance section manning meets mission requirements.

6.7.3.5. Ensure crewmembers are briefed on current or anticipated operations, equipment, and communications status to include:

6.7.3.5.1. Assigned Surveillance Area

6.7.3.5.2. Radar set-up

6.7.3.5.2.1. Sectors/subsectors

6.7.3.5.3. Corridor usage

6.7.3.5.4. IFF Interface

6.7.3.5.5. Surveillance radio/sensor limitations

6.7.3.5.6. Identify areas to be subdivided between STs, if necessary.

6.7.3.5.7. Review communications plan, frequency changes, and secure radio requirements

6.7.3.5.8. Coordinate track initiation/tracking responsibilities

- 6.7.3.5.9. Mode 4 requirements/restrictions
- 6.7.3.5.10. Map(s) required/grid use
- 6.7.3.5.11. Review link requirements and coordination
- 6.7.3.5.12. Console priorities
- 6.7.3.5.13. EA/EP activities
- 6.7.3.5.14. OM reset procedures
- 6.7.3.5.15. Emergency Action Plans (EAP)
- 6.7.3.5.16. CSAR/SAR operations procedures (including track trace and data record)
- 6.7.3.5.17. Ensure current weather information is available and provide to the mission crew.
- 6.7.3.6. Monitor and direct the accurate collection, display, and dissemination of surveillance data.
 - 6.7.3.6.1. Maintain a RAP and forward to the AOC and other C2 nodes as directed in the theater operations order (OPORD).
- 6.7.3.7. Coordinate and direct track production tasks for assigned area
- 6.7.3.8. Direct and/or coordinate the tracking and identification of all observed activity within designated areas.
 - 6.7.3.8.1. Monitor the overall theater track identification process and disseminate the air picture.
- 6.7.3.9. Execute the surveillance mission tasking, IAW the ATO, OPTASKLINK/TACOPDAT, ACO, Annex K, SPINS, ROE etc.
- 6.7.3.10. Direct organic sensors be configured and optimized for mission accomplishment.
- 6.7.3.11. Manage dissemination of flight plan information to adjacent and subordinate units.
- 6.7.3.12. Know the airspace structure to include common reference points in order to execute identification of tracks.
- 6.7.3.13. Analyze the surveillance situation and advise the MCC of system status.
 - 6.7.3.13.1. Direct organic sensors be configured and optimized for mission accomplishment.
- 6.7.3.14. Ensure system radar correlation check.
 - 6.7.3.14.1. Ensure remote radar data is correlated and data is received on all tracks within assigned area.
 - 6.7.3.14.2. Radar will be considered correlated when within 2 nautical miles and 2 degrees of the reference radar (T-2).

- 6.7.3.14.3. When correlation cannot be accomplished, advise MCC of radar discrepancy for forwarding to AOC.
- 6.7.3.15. Ensure any development that significantly impacts TDL capability is reported to the JICO.
- 6.7.3.16. Notify the MCC whenever EA is experienced and coordinate EP actions with the MCC and EPT.
- 6.7.3.17. Document all RADAR/IFF EW events on applicable forms and forward to appropriate agency.
 - 6.7.3.17.1. Develop the EMCON, EP and RADAR employment plans.
- 6.7.3.18. Ensure the EPT applies EP as appropriate to negate/reduce presentation degradation.
- 6.7.3.19. Manage and direct the data links as defined in the OPTASKLINK and other directives.
- 6.7.3.20. Coordinate with external agencies to ensure accurate multi-link operations IAW J/R/SICO guidance.
 - 6.7.3.20.1. The ASO coordinates any data link modifications (filters, duties, ID usage) with the JICO to ensure there are no impacts to the link architecture.
 - 6.7.3.20.2. Ensure concurrent TDL (i.e., stacked nets) operations are not conducted unless specifically mentioned in the OPTASKLINK or directed by the JICO.
 - 6.7.3.20.3. Monitors DCN/TSN as required.
- 6.7.3.21. Perform checkout of the system equipment required and crypto equipment to establish, maintain, and trouble shoot all applicable TDLs.
 - 6.7.3.21.1. Ensure assigned data link radios are powered and radio frequencies are assigned to meet mission requirements.
- 6.7.3.22. Configure assigned OM radios for data link communications (voice/data).
 - 6.7.3.22.1. Ensure cryptographic radio equipment is loaded and configured for the tasked mission.
 - 6.7.3.22.2. Perform checkout of radios required to establish and maintain data link connectivity (voice and TDLs).
- 6.7.3.23. Conduct TDL operations IAW the OPTASKLINK and other directives.
 - 6.7.3.23.1. Modify and maintain data link database information as required. Report data link problems to the ASO/T.
 - 6.7.3.23.2. Build and implement data link filters as required.
 - 6.7.3.23.3. Use switch actions to initiate, build, update and maintain all applicable TDLs.
- 6.7.3.24. Analyze and conduct troubleshooting of data link problems.

- 6.7.3.25. Maintain proficiency on the Link Management System – 16 (LMS-16) (if available)
- 6.7.3.26. Monitor track exchange operations over the TDLs.
- 6.7.3.27. Directs changes in data link configuration to the AST.
- 6.7.3.28. Interpret, coordinate and respond as directed to TDL messages.
- 6.7.3.29. Coordinate and plan the initial build of the database during mission planning.
 - 6.7.3.29.1. Monitor and update database adaptations for the battle management, surveillance, and weapons functions.
 - 6.7.3.29.2. Compile and load the database to ensure the system configuration meets operational requirements.
 - 6.7.3.29.3. Ensure database ATO/ACO information is correct and up to date.
 - 6.7.3.29.4. Ensure system configuration meets operational needs.
- 6.7.3.30. Configure system and database as directed.
- 6.7.3.31. Perform and/or coordinate system resets and/or IPLs as directed.
- 6.7.3.32. Perform hard drive directory and file management functions.
 - 6.7.3.32.1. Perform and/or coordinate all hard drive read and/or write activities.
 - 6.7.3.32.2. DELETED
 - 6.7.3.32.3. Download operating software onto the system server unit (SSU).
 - 6.7.3.32.4. Perform hard drive directory operations as directed.
 - 6.7.3.32.5. DELETED
 - 6.7.3.32.6. Select, copy, delete, review, rename, create and/or print hard drive directories as necessary.
 - 6.7.3.32.7. Set directory defaults and file attributes.
- 6.7.3.33. Assist maintenance technicians in troubleshooting equipment problems.
- 6.7.3.34. Load and configure cryptographic radio equipment as required for the mission.
- 6.7.3.35. Perform a radar correlation check when tasked.
- 6.7.3.36. Set up and operate the R/R, VCAS, OCUWS, and PRU to meet mission requirements.
- 6.7.3.37. Prepare a list of planned participants and supervise the allocation of addresses to interface units.
- 6.7.3.38. Perform the Link 16 manager planning and execution functions or designate the Link 16 manager.
- 6.7.3.39. Perform the Link 11/11B manager planning and execution functions or designate the Link 11/11B manager.

- 6.7.3.40. Manage connectivity between link participants including activation/deactivation of relays, and recommend change of transmit mode to normal or data silent to the JICO.
- 6.7.3.41. Conduct changeover briefings IAW CJCSM Joint Multi-TADIL Operations Procedures (JMTOP) directives.
- 6.7.3.42. Ensure multi-TDL requirements are considered during pre-mission planning for developing multi-TDL architecture.
- 6.7.3.43. Establish requirements for data forwarding and assign forwarding units, including standbys.
- 6.7.3.44. Specify the link management code list to be used for voice coordination.
- 6.7.3.45. Establish digital data contingency procedures for unscheduled partial or complete loss of links.
- 6.7.3.46. Direct changes or corrective action to the networks to ensure effective information exchange needed to support the changing operational situation.
- 6.7.3.47. Monitor and ensure that the JTIDS operations comply with (civil) restrictions on JTIDS transmissions in the operating areas.
- 6.7.3.48. Ensure site registration procedures are implemented as required and direct coordination to resolve registration problems with interfacing units.
- 6.7.3.49. Function as the ICO for the CRC and implement multi-link operations in accordance with directions and guidance from the JICO.

6.8. Air Surveillance Technician (AST). AFSC 1C571 (SSgt – MSgt), SEI 946 (T-3). The AST is responsible to the ASO for surveillance, airspace control, data link management functions as well as equipment readiness. The AST coordinates with the ASO to ensure RAP accuracy and distribution over the TDL network. The AST may perform all surveillance duties in the absence of an ASO.

6.8.1. The AST will perform duties from the OM (T-3).

6.8.2. As the senior surveillance technician in charge, ensures all mission crew technicians accomplish duties for mission accomplishment. The DST, ICT, EPT, and ST will report to the AST.

6.8.3. ASTs:

6.8.3.1. Under direction of the ASO, ensure that the surveillance section is briefed on the current mission and is familiar with mission planning documents outlined in [Attachment 6](#), section [A6.2](#).

6.8.3.2. Ensure all mission crew technicians accomplish duties for mission accomplishment. The DST, ICT, EPT, and ST will report to the AST.

6.8.3.3. Monitor overall system operations and act as the operations focal point for equipment status.

6.8.3.3.1. Ensure system equipment is powered, loaded, and operating IAW briefed settings.

- 6.8.3.3.2. Forward equipment and maintenance status to the ASO, MCC, or BSC as appropriate.
- 6.8.3.3.3. Monitor the Performance Monitor and Test (PM & Test) for system degradation.
- 6.8.3.3.4. Assist maintenance technicians in troubleshooting equipment problems.
- 6.8.3.4. Coordinate and plan the initial build of the database during mission planning.
 - 6.8.3.4.1. Monitor and update database adaptations for the battle management, surveillance, and weapons functions.
 - 6.8.3.4.2. Compile and load the database to ensure the system configuration meets operational requirements.
 - 6.8.3.4.3. Ensure database ATO/ACO information is correct and up to date.
 - 6.8.3.4.4. Ensure system configuration meets operational needs.
- 6.8.3.5. Configure system and database as directed.
- 6.8.3.6. Perform hard drive directory and file management functions.
 - 6.8.3.6.1. Perform and/or coordinate all hard drive read and/or write activities.
 - 6.8.3.6.2. DELETED
 - 6.8.3.6.3. Download operating software onto the system server unit (SSU).
 - 6.8.3.6.4. Perform hard drive directory operations as directed.
 - 6.8.3.6.5. DELETED
 - 6.8.3.6.6. Select, copy, delete, review, rename, create and/or print hard drive directories as necessary.
 - 6.8.3.6.7. Set directory defaults and file attributes.
- 6.8.3.7. Coordinate data base read/write activities.
- 6.8.3.8. Coordinate data base file management.
- 6.8.3.9. Coordinate system reset/initial program load (IPL).
- 6.8.3.10. Ensure crypto is loaded in all applicable systems.
- 6.8.3.11. Configure OM radios for operations.
- 6.8.3.12. Perform checkout of radios required to establish and maintain data link connectivity (voice and TDLs).
- 6.8.3.13. Pass equipment problems or outages to the BSC.
- 6.8.3.14. Coordinate with external agencies to ensure accurate link operations IAW J/R/SICO guidance.
 - 6.8.3.14.1. Coordinate data link modifications (filters, duties, ID usage) with the JICO to ensure there are no impacts to the link architecture.

- 6.8.3.14.2. Ensure concurrent TDL (i.e., stacked nets) operations are not conducted unless specifically mentioned in the OPTASKLINK or directed by the JICO.
- 6.8.3.14.3. Monitor DCN/TSN as required.
- 6.8.3.14.4. Ensure the DCN/TSN is used IAW the OPTASKLINK.
- 6.8.3.15. Conduct TDL operations IAW the OPTASKLINK and other directives.
 - 6.8.3.15.1. Modify and maintain data link database information as required. Report data link problems to the ASO/T.
 - 6.8.3.15.2. Build and implement data link filters as required. Troubleshoot link failures with ASO/T and DST.
 - 6.8.3.15.3. Use switch actions to initiate, build, update and maintain all applicable TDLs.
- 6.8.3.16. Monitor the DCN and other communication frequencies/systems as directed to coordinate with other TDL agencies.
- 6.8.3.17. Analyze and conduct troubleshooting of data link problems.
- 6.8.3.18. Monitor track exchange operations over the TDLs.
- 6.8.3.19. Interpret, coordinate and respond as directed to TDL messages.
- 6.8.3.20. Coordinate the designation and use of frequencies and/or channels to interface with TDLs and voice coordination networks.
- 6.8.3.21. Monitor and direct the accurate collection, display, and dissemination of surveillance data.
 - 6.8.3.21.1. Maintain a RAP and forward to the AOC and other C2 nodes as directed in the theater operations order (OPORD).
 - 6.8.3.21.2. Assign sub-areas to each ST, as necessary.
- 6.8.3.22. Direct detection, tracking, and identification of air traffic within the operations area.
- 6.8.3.23. Coordinate identification activities with other C2 nodes and (if present) ATC facilities.
- 6.8.3.24. Disseminate flight plan information.
- 6.8.3.25. Monitor and provide support to CSAR/SAR operations as required.
- 6.8.3.26. Analyze the surveillance situation and advise the ASO or MCC of system status.
 - 6.8.3.26.1. Direct organic sensors be configured and optimized for mission accomplishment.
- 6.8.3.27. Provide alternative system configuration changes to the ASO as required.
- 6.8.3.28. Perform radar tracking mode changes as necessary.

- 6.8.3.29. Coordinate sensor system configuration to support the overall surveillance mission.
- 6.8.3.30. Coordinate system and sensor configuration.
- 6.8.3.31. Coordinate for periodic radar evaluation program (PREP) assessment.
- 6.8.3.32. Perform a radar correlation check.
 - 6.8.3.32.1. Ensure remote radar data for correlation (radar is considered correlated when within 2 NM and 2 degrees) and data is received on all tracks.
- 6.8.3.33. Notify the ASO when EA or electromagnetic interference (EMI) is observed and/or reported.
 - 6.8.3.33.1. Ensure EP functions to counter EA.
 - 6.8.3.33.2. Enter and update jammer points (fixes) at suspected emitter locations.
 - 6.8.3.33.3. Assist the ASO to develop the EMCON, EP, and RADAR employment plan.
- 6.8.3.34. Coordinate with other C2 nodes and agencies to identify and locate jammers or other sources of interference.
- 6.8.3.35. Ensure the submission of EP reports as required.
- 6.8.3.36. Ensure jam strobes are displayed when encountered.
- 6.8.3.37. Recognize and counter communications jamming.
- 6.8.3.38. Authenticate voice transmissions.
- 6.8.3.39. Ensure the Recorder/Reproducer (R/R) and the Line Printer are operated IAW unit directives and Technical Orders (TOs).
- 6.8.3.40. Change system "Threat Mode".
- 6.8.3.41. Supervise data link operations IAW OPTASKLINK.
- 6.8.3.42. Coordinate with the ASO on data link changes.
- 6.8.3.43. Coordinate with external agencies for related TDL taskings/activities.
- 6.8.3.44. Analyze and conduct troubleshooting of data link problems.
- 6.8.3.45. Maintain proficiency on the Link Management System – 16 (LMS-16) (if available).
- 6.8.3.46. Supervise and monitor database operations as required.
- 6.8.3.47. Ensure surveillance/identification personnel know mission objectives.
- 6.8.3.48. Approve all "cancel track" actions.
- 6.8.3.49. Coordinate "voice tell" procedures IAW USMTF User Format.
 - 6.8.3.49.1. Direct STs to conduct "voice tell".
 - 6.8.3.49.2. Coordinate use of appropriate frequencies for "voice tell".

- 6.8.3.50. Monitor the TSN and provide guidance to ensure the optimum display of air, sea, and ground information.
- 6.8.3.51. Supervise/conduct surveillance responses during an ARM attack.
- 6.8.3.52. Perform mission data reduction, as directed.
- 6.8.3.53. Ensure information concerning anomalous propagation, thunderstorms, or unusual weather conditions are passed to the ASO.
- 6.8.3.54. Ensure significant surveillance events are logged by the BSC in the operations logbook, IAW [Chapter 8](#).
- 6.8.3.55. Ensure a rotation plan for surveillance/identification positions is executed to ensure adequate relief periods.
- 6.8.3.56. Know the airspace structure to include common reference points in order to execute identification of tracks.
- 6.8.3.57. Respond appropriately to aircraft emergency symbology and modes IAW aircraft emergency checklist.
- 6.8.3.58. Assist ASO in the conduct of emergency and quick response checklists, as appropriate.
- 6.8.3.59. Assist the ASO in the performance of duties as directed.
 - 6.8.3.59.1. Perform other duties as directed by ASO or MCC.
- 6.8.3.60. Assist with conducting the surveillance debrief; determine surveillance section accomplishments in relation to briefed mission objectives to include lessons learned.
- 6.8.3.61. Prepare and conduct a positional changeover briefing with the oncoming AST IAW the positional changeover briefing guide and unit checklists.

6.9. Interface Control Technician (ICT). AFSC 1C5(5/7)1 (A1C – TSgt, SEI 947). The ICT is responsible to the AST for establishing and maintaining TDLs and monitoring data link effectiveness. The ICT initializes the operations module equipment for use and monitors the status of internal/external communications, operator interface equipment, and the effective implementation of the mission database. The ICT will as a minimum be responsible for performing the following (T-3);

- 6.9.1. Knowing the JFC/JFACC intent and priorities.
- 6.9.2. Reviewing all relevant operational documents and be responsible to the appropriate command authorities for the application and execution to include but not limited to the following; exercise/theater OPLAN/OPORD (to include Annex K), ATO, ACO/ACP, OPTASK LINK, SPINS, ROE, TACOPDAT, AADP, CRC Communications Plan Template (FOUO), Joint Communications Electronic Operating Instruction (JCEOI), lessons learned data, aeronautical charts, and other mission-specific documents for deployment, employment, and redeployment phases of any operation or like training exercise.
- 6.9.3. Coordinating and planning the initial build of the TDL, battle management, surveillance, and weapons functions database during mission planning.

- 6.9.3.1. DELETED

6.9.3.1.1. DELETED

6.9.3.2. DELETED

6.9.3.2.1. DELETED

6.9.3.2.2. DELETED

6.9.3.3. DELETED

6.9.3.3.1. DELETED

6.9.3.3.2. DELETED

6.9.3.3.3. DELETED

6.9.3.4. Monitor the DCN and other communication frequencies/systems as directed to coordinate with other TDL agencies.

6.9.3.4.1. Coordinate with external agencies for related taskings/activities as directed.

6.9.3.5. DELETED

6.9.3.6. DELETED

6.9.3.7. DELETED

6.9.3.8. DELETED

6.9.3.9. DELETED

6.9.3.10. DELETED

6.9.3.11. DELETED

6.9.3.12. DELETED

6.9.3.13. DELETED

6.9.3.14. DELETED

6.9.3.15. DELETED

6.9.3.16. DELETED

6.9.3.17. DELETED

6.9.3.18. DELETED

6.9.3.19. DELETED

6.9.3.20. DELETED

6.9.4. Preparing and conducting the TDL portion of the assigned portion of the pre-mission Crew Briefing IAW Crew Aids (e.g. current link status, equipment status, etc.).

6.9.5. Ensuring established unit Go/No-Go criteria and criteria IAWAFI 13- Stan Eval Vol. 2, has been met.

6.9.6. Perform duties from the OM or other approved BMC2 system as mission environment dictates.

- 6.9.7. Performing duties from the OM, JM, or from any suitable area with access to link monitoring capability.
- 6.9.8. Ensuring a safe work environment in and around the general operations area to include the OM(s), UCC, AN/TPS-75 van(s), JTIDS Module, etc., if co-located, and other workspace areas. Report all safety hazards immediately and request disposition when corrected. Use safety equipment as necessary and implement unit-level emergency procedures IAW checklists if situation warrants.
- 6.9.9. Recognizing and reporting communications (voice and data) jamming.
- 6.9.10. Ensuring proper voice authentication procedures are employed.
- 6.9.11. Implementing procedures to counter communications jamming.
- 6.9.12. Performing all Link 16/11/11B Manager planning and execution functions IAW the OPTASK LINK and other directives.
- 6.9.13. Coordinating initial TDL configuration with external agencies to ensure accurate multi-link operations (e.g. taskings), IAW J/R/SICO guidance.
- 6.9.14. Coordinating recommended changes in TDL interface configuration with the AST/JICO/RICO/SICO as appropriate to meet mission objectives.
- 6.9.15. Building, implementing, and maintaining data link filters as required for applicable TDLs.
- 6.9.16. Coordinating recommended data link modifications (filters, duties, ID usage) with the AST/J/R/SICO and J/R/SICO as appropriate to minimize impacts to the link architecture.
- 6.9.17. Coordinating recommend changes with the AST and the JICO/RICO/SICO as appropriate to ensure effective information exchange needed to support the changing operational situation.
- 6.9.18. Ensuring concurrent TDL (i.e., stacked nets or multi-TDL) operations are not conducted unless specifically mentioned in the OPTASK LINK, directed by the J/R/SICO, and are planned during mission planning.
- 6.9.19. Maintaining proficiency on the LMS-16 (if available) or unit TDL monitoring and analysis system.
- 6.9.20. Detecting and reporting to the AST, and as required troubleshoot link failures with maintenance technicians and all applicable agencies (i.e. distant end users, RICO/SICO, etc.), that degrade TDL operations.
- 6.9.21. Monitoring track exchange operations over the TDLs.
- 6.9.22. Interpreting track symbols and modifiers to maintain situation awareness.
- 6.9.23. Interpreting, coordinate, and respond as directed to TDL messages.
- 6.9.24. Extracting information from mission planning documents.
- 6.9.25. Notifying ASO of any suspected emergency IFF/SIF returns or triangular distress patterns. Assist with aircraft emergencies IAW emergency checklist.

- 6.9.26. Reporting overall system status to the AST, and provide relevant mission data link information to include significant events, lessons learned, and overall system performance for crew debriefing.
- 6.9.27. Terminating TDLs only after receiving operational release from the appropriate controlling authority. However, if uncoordinated for whatever reason, notify the controlling authority as soon as possible if an emergency termination of a link becomes necessary or likely.
- 6.9.28. Supervising the automated passing of tactical data reports; voice tell is serves as a backup method.
- 6.9.29. Supervising the resolution of interface anomalies.
- 6.9.30. Supervising the resolution of dual designations.
- 6.9.31. Supervising the resolution of duplicate tracks.
- 6.9.32. Supervising the resolution of identification conflicts.
- 6.9.33. Supervising the resolution of category conflicts.
- 6.9.34. Ensuring transmission of change data orders to resolve environment and ID conflicts and recommending system configuration changes to the AST as appropriate.
- 6.9.35. Performing and/or coordinate system resets and/or IPLs as directed.
- 6.9.36. Performing hard drive directory and file management functions.
- 6.9.37. Performing and/or coordinate all hard drive read and/or write activities.
- 6.9.38. Downloading operating software onto the System Sever Unit (SSU).
- 6.9.39. Selecting, copying, deleting, reviewing, renaming, creating and/or printing hard drive directories as necessary.
- 6.9.40. Setting directory defaults and file attributes.
- 6.9.41. Evaluating remote radar data for correlation (considered correlated when within 2nm and 2 degrees of the reference radar) and ensuring data is received on all tracks.
- 6.9.42. Performing recording and post-mission data reduction as directed.
- 6.9.43. Conducting changeover briefings with the oncoming ICT IAW CJCSM 6120.01, *Joint Multi-Tactical Data Link (TDL) Operating Procedures* and positional changeover briefing guide and unit checklists.

6.10. Data Systems Technician (DST). AFSC 1C55/71 (A1C – TSgt), SEI 945. The DST is a certified duty position, not directly assigned to a mission crew. Individuals certified in this position will also hold a qualification in another position. DSTs (to include instructors/evaluators) that were qualified/certified prior to this IC are automatically DST certified and require no additional training or certification as a DST. The DST is responsible to the ASO/T for initializing operations module equipment for use and for monitoring the status of internal/external communications, operator interface equipment, and database information. Additionally, the DST is responsible for troubleshooting mission equipment malfunctions at the direction of the AST.

6.10.1. The DST will perform duties from the OM. The DST will prepare the equipment prior to operations to ensure system is functioning correctly.

6.10.2. The DST is required to be available during active operations.

6.10.3. The DST will:

6.10.3.1. Coordinate and plan the initial build of the database during mission planning.

6.10.3.1.1. Monitor and update database adaptations for the battle management, surveillance, and weapons functions.

6.10.3.1.2. Compile and load the database to ensure the system configuration meets operational requirements.

6.10.3.1.3. Ensure database ATO/ACO information is correct and up to date.

6.10.3.1.4. Coordinate with the MPC/MCC/ASO/AST/SD to plan, compile, and load the initial build of the TDL, battle management, surveillance, and weapons functions database to ensure the system configuration meets operational requirements.

6.10.3.2. Configure system and database as directed.

6.10.3.2.1. Coordinate recommended system configuration and data link database modifications to the AST as appropriate to meet mission objectives.

6.10.3.2.2. Perform and/or coordinate system resets and/or IPLs as directed.

6.10.3.2.3. Monitor and update database adaptations (e.g. ATO/ACO, etc.) for the battle management, surveillance, TDL, and weapons functions.

6.10.3.3. Perform hard drive directory and file management functions.

6.10.3.3.1. Perform and/or coordinate all hard drive read and/or write activities.

6.10.3.3.2. Mount/dismount hard drive(s).

6.10.3.3.3. Download operating software onto the system server unit (SSU).

6.10.3.3.4. Perform hard drive directory operations as directed.

6.10.3.3.5. Purge, format, copy and/or compare a hard drive as directed.

6.10.3.3.6. Select, copy, delete, review, rename, create and/or print hard drive directories as necessary.

6.10.3.3.7. Set directory defaults and file attributes.

6.10.3.3.8. Assist maintenance technicians in troubleshooting equipment problems.

6.10.3.4. Load and configure cryptographic radio equipment as required for the mission.

6.10.3.4.1. Ensure TDL mission communications and required systems are powered, operationally configured, and loaded (e.g. requested frequencies/cryptographic keys) for internal and external, vertical and lateral coordination to meet mission requirements for effective surveillance and TDL execution (voice/data), IAW the ATO/SPINS/OPTASK LINK or JICO/RICO/SICO/ASO/AST guidance as the mission dictates.

6.10.3.5. DELETED

6.10.3.5.1. DELETED

6.10.3.6. Monitor the PM & Test function or applicable systems status monitoring tool for system degradation and report discrepancies.

6.10.3.7. Configure, perform checkout, and operate the OCUWS and VCAS and chat windows IAW positional checklists to meet voice and TDL voice coordination networks requirements. (e.g., DCN, TSN, etc.), to maintain effective situational awareness.

6.10.3.7.1. Configure, checkout, and operate the recorder/reproducer and printer to meet mission requirements.

6.10.3.8. Extract information from mission planning documents as directed.

6.10.3.9. Ensure system configuration meets operational needs.

6.10.3.10. Prepare and conduct a positional changeover briefing with the oncoming DST IAW the positional changeover briefing guide and unit checklists, if applicable.

6.10.3.11. Provide computer system inputs and overall system performance to crew debriefing as appropriate and report system status to maintenance.

6.10.3.11.1. Perform recording and post-mission data reduction as directed.

6.11. Electronic Protection Technician (EPT), AFSC 1C55/71 (SrA – TSgt), SEI 944. The EPT is responsible to the ASO/T for conducting EP using the AN/TPS-75 radar set. The EPT recognizes and controls the effects of EA while maintaining the radar's presentation and emissions using the AN/TPS-75 system displays, EP functions, and switch actions. The EPT has a thorough understanding of EA and is able to apply the proper TTPs used to combat EA. The EPT understands the capabilities and limitations of the AN/TPS-75 radar set.

6.11.1. EPT is required to be on-duty at each radar while live aircraft are under control.

6.11.2. During 24-hour contingency operations EPTs must be present in the radar van (T-3).

6.11.3. When a Deployed Radar (DR) site is in operation, there must be a dedicated EPT assigned to the remote site with dedicated communication to the main deployed location site.

6.11.4. EPTs:

6.11.4.1. Extract information needed to execute the tasked mission from mission planning documents, as directed.

6.11.4.1.1. Work with the ASO/AST to develop the unit EMCON plan.

6.11.4.1.2. Extract weather information (e.g., air pressure, air temperature, and relative humidity) from a weather report.

6.11.4.2. Set up and operate the AN/UYQ-27 Situational Display Console (SDC) IAW unit checklists to meet mission requirements.

6.11.4.3. Interpret the message and data block on the SDC.

6.11.4.3.1. Set up and operate the AN/UPA-59A and AN/UPX-27 for operations.

6.11.4.4. Assign radio frequencies to meet mission requirements.

- 6.11.4.5. Set up and operate cryptographic radio equipment as required for the mission.
- 6.11.4.6. Know the location and proper use of the AN/TPS-75 radar van Main Power Safety Interrupt switch.
- 6.11.4.7. Set up and operate the AN/TPS-75 radar van communications.
- 6.11.4.8. Perform a radar correlation check.
 - 6.11.4.8.1. Evaluate remote radar data for correlation (considered correlated when within 2 nautical miles and 2 degrees of the reference radar) and ensure data is received on all tracks.
 - 6.11.4.8.2. Correlate radar data with adjacent sites to ensure accurate radar reporting.
 - 6.11.4.8.3. Perform Mode IV checks IAW checklists and theater directives.
 - 6.11.4.8.4. Load Mode 4 IAW unit checklist.
 - 6.11.4.8.5. Conduct PREP assessment IAW AFI 13-101.
 - 6.11.4.8.5.1. Pass the single-word PREP assessment to the BSC for inclusion in the operations logbook IAW [Attachment 11](#).
 - 6.11.4.8.6. Keep detailed log of maintenance problems experienced during radar transmission time and debrief radar maintenance personnel equipment during handover.
- 6.11.4.9. Control, configure, and monitor the operational status of the AN/TPS-75 radar using the Radar Control Panel (RCP) and the MCE Interface Group (MIG) IAW checklists.
 - 6.11.4.9.1. Read, interpret and enter mission requirements into the radar system using the RCP and the MIG IAW unit checklists.
 - 6.11.4.9.2. Optimize radar settings to neutralize the affects of anomalous propagation, thunderstorms, and weather anomalies.
 - 6.11.4.9.3. Select appropriate video(s) to detect jammers and associated jammer track(s) and coordinates, with other C2 nodes and agencies to identify and locate jammers or other sources of interference (i.e., triangulation).
- 6.11.4.10. Evaluate non-organic radar data using the multi-source correlator tracker (MSCT).
- 6.11.4.11. Inform the ASO/T when EA is experienced.
 - 6.11.4.11.1. Submit EA and Spectrum Interference Resolution (SIR) reports IAW [Chapter 7](#) when jamming and/or interference is encountered.
 - 6.11.4.11.2. Recommend EMCON measures and levels to the ASO/T, IAW AFTTP 3-1.TACS, as appropriate.
 - 6.11.4.11.3. Use EP and EMCON procedures to counter EA.
- 6.11.4.12. Recognize and report jamming.

6.11.4.13. Authenticate voice transmissions within time limits specified on authenticators.

6.11.4.14. Know the in-theater ARM threat.

6.11.4.14.1. Know ARM carrier capabilities and possible ARM carrier attack profiles

6.11.4.14.2. Conduct ARM defense option procedures IAW AFTTP 3-1 TACS and unit checklists.

6.11.4.15. Coordinate with radar maintenance to optimize radar performance and limit down time.

6.11.4.16. Recognize, track, and report aircraft emergencies to the AST.

6.11.4.17. Perform “voice tell” as directed, IAW USMTF User Format and [Attachment 2](#).

6.11.4.18. Under guidance from ASO/AST, perform unit level emergency procedures IAW checklists

6.11.4.19. Provide surveillance data, records, and reports to the ASO/AST as directed.

6.11.4.20. Prepare and conduct a positional changeover briefing with the oncoming EPT IAW the positional changeover briefing guide and unit checklists, if applicable.

Note: EPTs perform a limited surveillance function when the remote link is down between the DR and the OM. They track by exception. The process is to detect, and voice tell tracks to the ST in the OM. The ST maintains the ID function. The ASO/T directs voice tell and cease tell, as necessary.

6.12. Surveillance Technician (ST). AFSC 1C53/51(AB – SrA), SEI 943. The ST is responsible to the ASO/T for track detection, initiation, identification, and maintenance for all tracks within the operations area. The ST has knowledge of classification/identification procedures and criteria as governed through applicable theater guidance.

6.12.1. The ST will be in the OM for operations with an assigned area or Track Production Area (TPA) (T-3).

6.12.2. STs:

6.12.2.1. Detect, initiate, identify, display, and maintain all tracks within the assigned area.

6.12.2.1.1. Perform Mode IV checks IAW checklists and theater directives.

6.12.2.1.2. Notify the ASO/T of special interest/unknown tracks.

6.12.2.1.3. Provide surveillance and identification-related data, records, and reports to the AST as directed.

6.12.2.2. Correlate track data from adjacent sites to ensure track continuity.

6.12.2.2.1. Correlate friendly aircraft, not in the ATO, based on available flight plan data.

6.12.2.3. Recognize, track, and report aircraft emergencies to the ASO/T.

- 6.12.2.3.1. Perform assistance actions IAW appropriate checklists and ASO/T direction.
- 6.12.2.4. Monitor WD/AWO control frequencies as directed.
- 6.12.2.5. Perform voice tell as directed, IAW USMTF User Format and [Attachment 2](#).
- 6.12.2.6. Recognize and report unusual presentations (EA, EP, anomalous propagation, weather, etc.) to the AST.
 - 6.12.2.6.1. Notify the ASO/T when electronic or mechanical interference is observed.
 - 6.12.2.6.2. Enter jam strobes after coordination with the ASO/T.
- 6.12.2.7. Monitor and provide support to CSAR/SAR operations as directed.
- 6.12.2.8. Set up and operate the R/R, VCAS, OCUWS, and LPU to meet mission requirements.
 - 6.12.2.8.1. Configure assigned radios for voice tell operations.
 - 6.12.2.8.2. Build and assign voice communications circuits as directed.
- 6.12.2.9. Recognize, report, and counter communications jamming.
- 6.12.2.10. Extract applicable ACO information and provide to the DST for system data base loads (e.g., Low Level Transit Routes (LLTR), Safe Passage, Missile Engagement Zone (MEZ), High Density Aircraft Control Zone (HIDACZ)) as required.
- 6.12.2.11. Provide surveillance and identification-related data, records, and reports to the ASO/T as directed.
- 6.12.2.12. Prepare and conduct a positional changeover briefing with the oncoming ST IAW the positional changeover briefing guide and unit checklists, if applicable.

Chapter 7

TACTICAL DATA REPORTING

7.1. General. The primary method of submitting reports is through an automated system; voice serves as a backup method.

7.1.1. ICT instructor cadre performs this function at the FTU.

7.2. Tactical Data Link Operations.

7.2.1. Link Maintenance. TDL is maintained as dictated by the JICO and re-established as soon as practicable IAW theater circuit prioritization, if lost. The controlling agency is notified of the loss of the link.

7.2.2. Termination. TDLs are normally terminated only after receiving operational release from the appropriate controlling authority.

7.2.3. Emergency Termination. When possible, the controlling authority should be notified if emergency termination of a link becomes necessary or likely.

7.3. Joint and Air Force Reporting. Forward reports, such as those listed below ([Table 7.1](#)), by voice, SIPRNET, or text to the appropriate higher echelon, as required by appropriate directives. Joint Chiefs of Staff publications, Air Force Instructions, and appropriate OPORDs/OPLANs established reporting requirements. The following are representative reports that may be required; this is not all-inclusive and is dependent on mission requirements or theater directives. All reports must be completed IAW applicable directives (T-0).

Table 7.1. Joint and Air Force Reporting.

Report	OPR	Purpose
Situation Report (SITREP)	CC	Inform AOC of operational plans, unit readiness degradation, and operational situations/summaries, and ultimately keep the JCS, and as appropriate, the CCs of unified and specified commands, the services, and other interested agencies informed of significant situations. The SITREP may be used to report operational problems, limiting factors, recommended or intended courses of action, and other items not reported elsewhere. It should only report changes in the situation since submission of the last report. Specific reporting times may be submitted at the originator's discretion or higher echelon authority (HEA) direction.
Operational Report - 3 (OPREP -3)	CC	The OPREP-3 is used by any unit to provide the JFC and appropriate CCs with immediate notification of any incident or event where national interest is not indicated or has not been determined.
Status of Resources	CC/BSC	The SORTS report is used to provide authoritative

and Training System (SORTS)		identification, location, and resource information on units and organizations of the U.S. and of designated foreign armed forces.
Nuclear, Biological, and Chemical (NBC) 1 Report	CC/BSC	The NBC-1 is used to provide the observer's initial report giving basic data on a nuclear, biological, or chemical attack.
In-Flight Report (INFLIGHTREP)	SD	The INFLIGHTREP is used to report mission results and/or information of tactical or intelligence value. The voice message is used by pilots/aircrews to give a broad assessment of mission accomplishment and/or any other tactical information sighted of such importance and urgency that the delay, if reported by normal debriefing would negate the usefulness of the information.
Intelligence Report (INTREP)	Intel	The INTREP is used to provide for the joint exchange of information obtained through tactical collection efforts. The INTREP provides timely information regarding events that could have an immediate and significant effect on current planning and operations, or information that may be of timely interest at the national level.
Intelligence Summary (INTSUM)	Intel	The INTSUM is used to provide a brief summary of information of intelligence interest covering a specific period of time, as specified by the JFC. The INTSUM provides a summary of the enemy situation in forward and rear areas, enemy operations and capabilities, and weather and terrain characteristics. The INTSUM reflects the intelligence staff officers' interpretation and conclusions as to enemy capabilities and probable courses of action.
*Electronic Attack Data Message (EDAT)	EPT/AST/MCC/SD	The EADAT is used to report EA strobe data in the absence of a data link message. Communications Jamming is reported to Intel by the MCC/SD to be forwarded to the AOC via a Joint SIR.
Alert Status for Air and Ground Alerts (ACSAMSTAT) Report, (SAMSTATREP), and SAM Tactical Order (STO)	SD/ADAFCO	The ACSAMSTAT is used to report the availability and alert status of air defense aircraft and the SAMSTATREP is used to report the availability of friendly SAMs for the management of the joint operations area (JOA) air defense by the AADC. The STO is used to report the specific Firing Unit (FU) launcher Alert States (AS) states, as well as ID and engagement authorities for all air breathing threats (ABTs), Cruise Missile threats (CMs), Unmanned Aerial System threats (UAS), Anti-radiation Missile

		threats (ARM), and Theater Ballistic Missiles (TBMs.)
*ABT/TBM Engagement Reports	Tactical Director (TD)/ SD/ ADAFCO	The ABT/TBM Reports will be as complete as possible and submitted to the next higher headquarters upon request or within 30 minutes of initial engagement. PATRIOT fire units will hardcopy all engagements to aid in reporting.
*Spectrum Interference Resolution (SIR)	MCC	A unit affected by a SIR incident begins an investigation to identify the source and submits a SIR report within 24 hours of the incident.
Mission Report (MISREP)	MCC/SD	The MISREP is used to report mission results and items of intelligence interest in all tactical roles. The MISREP message is filled out to provide timely reports of mission results (e.g. BDA) and all other intelligence information obtained during post-flight debriefing. The MISREP is used to report specific results of non-imagery recorded tactical combat missions and sightings made along ingress and egress routes (observed threats/suspicious activity, electromagnetic activity), and overall mission effectiveness. The MISREP may be used to retransmit or amplify an in-flight report and is submitted to the tasking agency, the requesting unit/agency, and to other interested organizations.

Chapter 8

ADMINISTRATIVE REQUIREMENTS

8.1. General. This chapter establishes the requirements and provides guidance for the maintenance of required publications, records, forms, briefings and documentation.

8.2. Disposition of Documentation. All forms completed during the tour of duty will be appropriately marked and filed chronologically (T-3). Maintain forms a minimum of 60 days and dispose of those records in accordance with the Air Force Records Disposition Schedule (RDS) located at <https://www.my.af.mil/gcss-af61a/afrims/afrims/rims.cfm>. Contact supporting records managers for approval as required.

8.3. Forms Requirements. The DO ensures AF Form 4145, Daily Activity Log, AF Form 4146, Mission Briefing Guide, DD Form 1972, Joint Tactical Air Strike Request, DD Form 1975, Joint Tactical Air Reconnaissance/Surveillance Request, and FAC CAS 9-Line Briefing Form are readily available to meet operational requirements in support of CRC operations.

8.3.1. AF Form 4145, Daily Activity Log. The MCC or crew leader is responsible for the Daily Activity Log. The form is required to be completed and signed at the completion of each operations crew shift and forwarded to the DO for approval and signature. The daily activity log provides a complete summary of all crew operations for a particular shift and is an important tool for data correlation and analysis.

8.3.2. AF Form 4146, Mission Briefing Guide. Use the Mission Briefing Guide to brief missions, record mission results, and serve as a record of unit control activities. WDs/AWOs use the form for all control activities conducted and forwarded to the MCC or crew leader for review and attachment to AF Form 4145.

8.4. Operations Checklists and Crew Aids. Operations checklists are lists of actions that require mandatory, sequential compliance.

8.4.1. Three categories of check lists: Normal Checklists (N), Emergency Checklists (E), and Quick Reaction Checklists (Q).

8.4.1.1. Normal Checklists (N) are used for equipment power up/down and normal operations and employment.

8.4.1.2. Emergency Checklists (E) are used for events that immediately threaten personnel, equipment, or aircraft with death, injury or destruction. Emergency checklists are denoted by a banded border.

8.4.1.3. Quick Reaction Checklists (Q) are used for situations that require prompt response, but which do not constitute emergency situations.

8.4.2. Crew Aids are a standard set of documents to facilitate mission execution. Crew aids are black on white background and contain charts, diagrams, lists, indexes, guides and other unclassified reference information deemed useful, but strict compliance is not required. Crew aids are issued for specific duty positions (e.g., WD, MCC) and are organized by distribution groups. The groups are; I-Indexes, X-Emergency Guides, D-Directories, P-

Planning Guides, G-General Guides, M-Mission Guides, J-Joint Operations, W-Weapons, S-Surveillance.

8.4.2.1. The crew aids can be distributed in any manner deemed appropriate by the DO. They can be made available on position or each crewmember may be provided an individual copy.

8.4.2.2. All checklists and crew aids are distributed over the HQ ACC/A3YG website, on the AF Portal. The checklists and crew aids are designed to be incorporated into standard 4"x 7" flight crew checklist plastic binders.

8.4.2.3. Operations checklists will be available to each operations crewmember before declaring the CRC operational or limited operational during peacetime operations (T-3). During wartime operations, the CRC will not delay activation of operations to satisfy this requirement; however, checklists and crew aids should be available for operator use as soon as possible after declaring the CRC operational or limited operational (T-3).

8.4.2.4. HQ ACC/A3CG will be responsible for maintaining the checklists and crew aids on HQ ACC/A3CG website, on the AF Portal and will provide the instructions for their use IAW this directive.

8.4.2.5. Recommended changes to checklists and crew aids will be made using AF Form 847 and submitted through appropriate channels (T-3). HQ ACC/A3CG will review, incorporate approved changes and post on HQ ACC/A3CG website, on the AF Portal. ACC/A3CG will notify the units of specific changes via separate memorandum/message.

8.4.2.6. It is the individual operations crewmember's responsibility to ensure they have and use the current checklists and crew aids. The DO can authorize the creation of checklist and crew aid supplements, to include local procedures, as needed. The supplements will be IAW the existing format (T-3).

8.4.3. Administrative Requirements. Prepare and maintain operations checklists IAW the following administrative guidelines:

8.4.3.1. Checklists and crew aids should be incorporated into standard 4"x 7" flight crew checklist binders for use in the OM.

8.4.3.2. Each unit will develop internal review procedures to ensure current checklists are in use (T-3). The review will be verified in writing (T-3). All checklists will be reviewed annually (T-3).

8.4.3.2.1. The first page of each checklist and crew aid binder will contain the date of the last review and the initials of the reviewer (T-3). The reviewer's initials signify the checklists and crew aids are current. All checklists and crew aids will be marked IAW DoD Directive 5200.1-R (T-0).

8.4.3.3. The checklist titled, "Controlling A/C Emergency", banded in black will be the first checklist in any binder (T-2).

8.4.3.4. Checklists and crew aids will be in the front of the binder and separated from other material, if combined with other operational guides or documents, such as locally developed handbooks (T-3).

8.4.3.5. Personnel manning an operations position must have in their possession the checklists as indicated by the checklist matrix listed in Attachment 9 (T-3).

8.5. COMSEC Requirements. The MCC, through individual sections, ensures required COMSEC materials (Voice Callsign List, codes and authenticators) are available to operations crews. COMSEC material not maintained in the OIF will be signed out from the unit COMSEC custodian (T-3). Issue, protection, and disposition of COMSEC material will be IAW DoD Directive 5200.1R, AFI 31-401, and Air Force Cryptographic Operational General (AFKAG)-1 (T-0).

8.5.1. This function is performed by Current Operations at the FTU.

8.6. Operations Information File (OIF). The OIF is required to ensure that information essential to the conduct of operations or emergency conditions are available. The read file portion of the OIF centralizes significant, time sensitive issues and procedures that are disseminated to operations personnel. Procedures for maintenance of the OIF are contained in applicable MAJCOM directives. The MCC (or DO/ADO at FTUs) is responsible to ensure all crew members read and initial items contained in the read file.

8.7. Operations Logbook.

8.7.1. The Operations logbook is the official record of events that occurred during any live operation, exercise (live or simulated). The purpose is to maintain an accurate and detailed record of all significant events pertaining to operations occurring during each crew shift. Of primary importance are events that may result in subsequent investigations. The DO will ensure the Operations Logbook is properly maintained (T-3). The following procedures apply for all logbooks:

8.7.1.1. Maintain the logbook in a permanently bound book such as a ledger or a journal.

8.7.1.2. Classify the logbook SECRET since it contains information concerning actual or exercise alert warnings and states of preparedness, system capabilities, and other classified data. The logbook will be marked, handled, and stored IAW DoD Directive 5200.1R, *Information Security Program Regulation*, AFI 31-401, *Information Security Program Management* (T-0).

8.7.1.3. Make entries in the logbook in black or blue ink. Do not erase entries made in the logbook. Correct errors in entries by lining through the entry, placing individual's initials at the end of the entry, and re-entering correct information on the next line.

8.7.1.4. Open the logbook at 0001Z or at the beginning of the duty day and close it at 2400Z or the end of the duty day. Use ZULU time for all entries.

8.7.1.5. If a change in ZULU day occurs during the tour of duty, close the logbook and reopen it at that time.

8.7.1.6. When opening and closing the logbook for the ZULU day or changing crews, include the operational crew identifier in the sign-on/off duty line.

8.7.1.7. It is not necessary to record information that has already been noted in another authorized document or has been recorded unless it is deemed appropriate for clarity and understanding.

8.7.1.8. When using the logbook it is not necessary to record information that has already been noted in another authorized document or system or has been recorded unless it is deemed appropriate for clarity, understanding or classification.

8.7.1.8.1. Time of each entry (using ZULU time).

8.7.1.8.2. The MCC or DO Designee available will sign at the beginning and end of the tour of duty (indicating the time on/off duty with a legible rank and signature) certifying all entries are accurate and reflect a complete record of the tour of duty (T-3).

8.7.1.8.3. Callsign of unit(s) to which information is received or sent.

8.7.1.8.4. Initials of both individuals passing and receiving information.

8.7.1.8.5. Verbal orders or instructions that deviated from standard operating procedures, to include any authentication used and if a reply was appropriate.

8.7.1.8.6. R/R tape data.

PHILIP M. BREEDLOVE, Lt Gen, USAF
DCS, Operations, Plans and Requirements

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFPD 13-1, *Command and Control Enterprise (C2 Enterprise)*, 6 August 2012

AFI 11-214, *Air Operations Rules and Procedures*, 14 August 2012

AFI 13-1 *Standardization/Evaluation Volume 2, Ground Command and Control Systems Standardization/Evaluation Program*, 11 Dec 2009

AFI 48-123, *Medical Examination and Standards Volume 1*, 24 Sep 2009

AFI 36-2101, *Classifying Military Personnel (Officers and Airmen)*, 7 Mar 2006

AFTTP 3-1 *Theater Air Control System (TACS)*, 30 Sep 2009

Abbreviations and Acronyms

A1C—Airmen First Class (E-3)

AADC—Area Air Defense Commander

AADP—Area Air Defense Plan

AAR—After Action Report

ABE—Air Battle Execution

ABM—Air Battle Manager

ABT—Air Breathing Threat/Target

ACC—Air Combat Command

ACO—Airspace Control Order

ACM—Airspace Control Measures

ACP—Airspace Control Plan

ACS—Air Control Squadron

ACSAMSTAT—Alert Aircraft/SAM status

ADA—Air Defense Artillery

ADAFCO—Air Defense Artillery Fire Control Officer

ADCCN—Air Defense Command and Control Net

ADCON—Administrative Control

ADO—Assistant, Director of Operations

ADP—Automated Data Processing

AETC—Air Education and Training Command

AETACS—Airborne Elements of the Theater Air Control System

AF—Air Force

AFARN—Air Force Air Request Net

AFKAG—Air Force Cryptographic Operational General

AFI—Air Force Instruction

AFDPO—Air Force Policy Directive Office

AFM/AFAM—Air Force Manual

AFRC—Air Force Reserve Command

AI—Air Interdiction

ALSA—Air Land Sea Application Center (AFTTP 3-3 series)

ARM—Anti-Radiation Missile

AFSC—Air Force Specialty Code

AJ—Anti-Jamming

AMTI—Air Moving Target Indicator

ANG—Air National Guard

AOC—Air and Space Operations Center

AOD—Air Operations Directive

AOI—Area of Interest

AOO—Area of Operations

AOR—Area of Responsibility

AR—Air Refueling

ARU—Air Radar Unit

ASO—Air Surveillance Officer

ASOS—Air Support Operations Squadron

AST—Air Surveillance Technician

ATO—Air Tasking Order

AST—Air Surveillance Technician

AWACS—Airborne Warning and Control System

AWO—Air Weapons Officer

BA—Battle Awareness

BC3— Battlespace Command and Control Center

BLOS—Beyond Line of Sight

BDA—Battle Management Assessment

BM—Battle Management
BMA—Battle Management Area
BMC2—Battle Management Command and Control
BS—Battle Staff
BSC—Battle Staff Coordinator
BVR—Beyond Visual Range
C2—Command and Control
C4I—Command, Control, Communications, Computer, and Intelligence (C4I)
CAP—Combat Air Patrol
CAPT—Captain
CAS—Close Air Support
CAF—Combat Air Forces
CC—Commander
CCD—Camouflage, Concealment, and Deception
CCO—Chief, Combat Operations (AOC)
CDE—Collateral Damage Estimate
CIA—Central Intelligence Agency
CID—Combat Identification
CFP—Chief, Force Protection
CJCSM—Chairman of the Joint Chiefs Staff Manual
CMR—Combat Mission Ready
CMSGT—Chief Master Sergeant
CONOPS—Concept of Operations
CONUS—Continental United States
CRC—Control and Reporting Center
COMSEC—Communications Security
CSAR—Combat Search and Rescue
CT—Continuation Training
DAL—Defended Asset List
DCA—Defensive Counter Air
DDO—Defensive Duty Officer
DEAD—Destruction of Enemy Air Defenses

DNIC—Duty Not Involving Controlling
DO—Director of Operations (Operations Officer)
DOC—Designed Operational Capability
DoD—Department of Defense
DR—Deployed Radar
DP—Disaster Preparedness
DST—Data System Technician
DT—Dynamic Targeting
EA—Electronic Attack
EAP—Emergency Action Plan
ECP—Entry Control Point
EADAT— EA Data Message **EMCON**—Emission Control
EMERGCON—Emergency Conditions
EMI—Electromagnetic Interference
EMP—Electro-magnetic Pulse
EP—Electronic Protection
EPT—Electronic Protection Technician
ETRO—Estimated Time of Return to Operation
EW—Electronic Warfare
FAC— A—Forward Air Controller – Airborne
FCE—Fire Control Element
FDC—Fire Direction Center/Control
FMC—Fully Mission Capable
FPCON—Force Protection Condition
FP—Force Protection
FTU—Field Training Unit
FTX—Field Training Exercise
FU—Fire Unit (ADA)
GEOREF—Geographical References
GPS—Global Positioning System
HHQ—Headquarters
HIDACZ—High Density Air Control Zones

HF—High Frequency
HVAA— High Value Airborne Asset
ICAO—International Civil Aviation Organization
IAW—In Accordance With
ICC—Information Coordination Center
ICT—Interface Control Technician
ID—Identification
IFF/SIF—Identification, Friend, or Foe/Selective Identification Feature
INFLIGHTREP—In-flight Reports
IFR—In-flight Reports
INTREP—Intelligence Report
INTSUM—Intelligence Summary
ISR—Intelligence, Surveillance, and Reconnaissance
ITO—Integrated Tasking Order
J/CFACC—Joint/Combined Forces Air Component Commander
JC—Job Control
JCEOI—Joint Communications Electronic Operating Instruction
JCN—Job Control Number
JE—Joint Exercise
JFC—Joint Force Commander
JFARN—Joint Forces Air Request Net
JICO—Joint Interface Control Officer
JM—JTIDS Module
JMTOP—Joint Multi-TADIL Operations Procedures
JSTARS—Joint Surveillance Target Attack RADAR System
JR2—Joint Remote Radio 2
LERTCON—Alert Condition
LFE—Large Force Exercise
LIMFAC—Limiting Factor
LMS—Link Management System
LOP—Local Operating Procedure
Lt Col—Lieutenant Colonel

MAJ—Major
MAJCOM—Major Command
MCC—Mission Crew Commander
MCE—Modular Control Equipment
MCS—Modular Control System
MEZ—Missile Engagement Zone
MFR—Memorandum for Record
MISREP—Mission Report
MOA/MOU—Memorandums of Agreement/Understanding
MOC—Maintenance Operations Center
MOPP—Mission-Oriented Protective Posture
MQT—Mission Qualification Training
MRU—Military RADAR Unit
MSCT—Multi-Source Correlator Tracker
MSGT—Master Sergeant
MSN—Mission Qualification Evaluation
MTE—Mission Training Exercise
NAI—Named Area-of-Interest
NATO—North Atlantic Treaty Organization
NORA—Non-organic RADAR access
NTR—Net time Reference
OCA—Offensive Counter Air
OCR—Office of Collateral Responsibility
OCUWS—Operator Console Unit Workstation
OIF—Operations Information File
OG—Operations Group
OM—Operations Module
OPLAN—Operations Plan
OPORD—Operations Order
OPREP—Operational Report
OPTASK LINK—Operational Tasking, Data Link (USMTF)
OPR—Office of Primary Responsibility

OPSEC—Operations Security
OSS—Operations Support Squadron
OTO—Operations Training Officer
PA—Public Affairs
PACAF—Pacific Air Forces
PCS—Permanent Change of Station
PID—Positive Identification
PIREP—Pilot Report
PM & Test—Performance Monitor and Test
POFA—Programmable Operational and Functional Appraisal
POO—Point of Origin
PREP—Periodic Radar Evaluation Program
PRU—Printer Recorder Unit
RADC—Region Air Defense Commander
RAP—Ready Aircrew Program/Recognizable Air Picture
RCP—RADAR Control Panel
RDS—Records Disposition Schedule
RICO—Region Interface control Officer
RF—Radio Frequency
RJ—Rivet Joint
ROE—Rules of Engagement
ROZ—Restricted Operating Zone
R/R—Recorder/Reproducer
RRSVS—Remote Radio Secure Voice System, AN/TRC-215
R/T—Receive and Transmit
SA—Situational Awareness
SADL—Situational Awareness Data Link
SADC—Sector Air Defense Commander
SADO—Senior Air Defense Officer
SAM—Surface-To-Air Missile
SAMSTATREP—Surface-to-Air Missile Status Report
SATCOMS—Satellite Communications

SC—System Center
SD—Senior Director
SDC—Situational Display Console
SEAD—Suppression of Enemy Air Defenses
SEI—Special Experience Identifier
SHORAD—SAM Short Range Air Defense
SICO—Sector Interface Control Officer
SITREP—Situation Reports
SODO—Senior Defensive Duty Officer
SORTS—Status of Readiness and Training
SPINS—Special Instructions
SIPR—Secret Internet Protocol, Routed
SRA—Senior Airmen
SRO—Senior Ranking Officer
SSGT—Staff Sergeant
SSTO—Short Range Air Defense Tactical Order
SSU—System Server Unit
ST—Surveillance Technician
STO—SAM Tactical Order
SWD—Senior Weapons Director
SYSCON—System Control
TACON—Tactical Control
TACOPDAT—Tactical Operations Data
TACS—Theater Air Control System
TAGS—Theater Air Ground System
TBM—Theater Ballistic Missile
TBMCS—Theater Battle Management Core Systems
TDC—Tactical Deployable Communications
TDL—Tactical Data Link
TDY—Temporary Duty
TIC—Troops in Contact
TMD—Theater Missile Defense

T.O.—Technical Order
TOI—Track-of-Interest
TR—Training Requirements
TRI—TAC—Tri-Service Tactical Communications System
TRS—Training Squadron
TS—Test Squadron
TSGT—Technical Sergeant
TTP—Tactics, Techniques, and Procedures
UCC—Unit Command Center
UHF—Ultra High Frequency
USAFE—United States Air Forces in Europe
USAFWS—United States Air Force Weapons School
UTC—Unit Type Code
UTM—Universal Transverse Mercator
UXO—Unexploded Ordnance
WD—Weapons Director
ZULU—Coordinated Universal Time (UTC)

Attachment 2**VOICE TELL FORMATS**

A2.1. New Track Report. Formats are IAW CJCSM 6120.01D. Specific line numbers to be used are coordinated during mission planning or briefed prior to the start of voice tell.

A2.1.1. New Track Report:

- A2.1.1.1. Line 1: ID (Friendly, Unknown, Hostile, etc.)
- A2.1.1.2. Line 2: Position (bearing and range from a coordinated point)
- A2.1.1.3. Line 3: Track (track number)
- A2.1.1.4. Line 4: Heading (degrees)
- A2.1.1.5. Line 5: Speed (knots)
- A2.1.1.6. Line 6: Altitude (hundreds of feet)
- A2.1.1.7. Line 7: Engaged (yes or no; use only for Unknowns, Pending, Hostiles)
- A2.1.1.8. Line 8: Number and type (number and type of track, e.g., two MiG 21)
- A2.1.1.9. Line 9: Squawk (IFF/SIF mode and code)
- A2.1.1.10. Line 10: Mode 4 (Confirmed Friend, No Response, Not Interrogated)
- A2.1.1.11. Line 11: Category (air, land, surface, subsurface, point)
- A2.1.1.12. Line 12: Time (ZULU time of the report if the report is relayed or is for a non-real-time track)
- A2.1.1.13. Line 13: Narrative (significant information not covered elsewhere)
- A2.1.1.14. Line 14: Time (ZULU time of the report)
- A2.1.1.15. Line 15: Authentication (if required)

A2.1.2. Revision Report. The following line numbers from the New Track Report are used:

- A2.1.2.1. Line 2: Position (bearing and range from a coordinated point)
- A2.1.2.2. Line 3: Track (track number)
- A2.1.2.3. Line 4: Heading (degrees)
- A2.1.2.4. Line 5: Speed (knots)**
- A2.1.2.5. Line 6: Altitude (hundreds of feet)
- A2.1.2.6. Line 13: Narrative (significant information not covered elsewhere)
- A2.1.2.7. Line 15: Authentication (if required)

A2.2. New Track Report – Manual Environment

- A2.2.1. New track
- A2.2.2. Identification

A2.2.3. Geographic Reference (GEOREF)

A2.2.4. Heading

A2.2.5. Time (ZULU)

A2.2.6. Track designator

A2.2.7. Flight size

A2.2.8. Speed

A2.2.9. Altitude (SIF S/RADAR R)

A2.2.10. Remarks (SIF Mode 3)

EXAMPLE: “New Track, Pending, Lima Mike Golf Charlie four three two one, three six zero, 1730Z, Bravo two one four, one object, two seven five, R two four zero, Mode 3 code two one zero zero.”

A2.3. Revision Report. Forward reports using the following sequence, and identify the parameter being changed by including the format heading in the report. The following is the revision report format:

A2.3.1. Revision

A2.3.2. Track designator

A2.3.3. Position (GEOREF or Lat/Long)

A2.3.4. Time (ZULU)

A2.3.5. Changes in amplifying data. **EXAMPLE:** “Revision, Alpha two one five, Mike Lima Golf Golf one two three five, 1603Z, R three three zero, speed four two zero.”

A2.4. Drop Track Report. When data cannot be confirmed, the drop track reporting sequence is:

A2.4.1. Drop track

A2.4.2. Track designator. **EXAMPLE:** “Drop track, Alpha two one six.”

A2.5. EA Data Message (EADAT). When EA is observed, report it to external agencies in the following sequence:

A2.5.1. EA

A2.5.2. Line 1. TRACK (Strobe Number)

A2.5.3. Line 2. BEARING (Bearing of the EA Strobe from Affected/Detecting Unit's Position)

A2.5.4. Line 3. POSITION (Affected/Detecting Equipment's Position in Bearing and Range, GEOREF, UTM, or X-Y)

A2.5.5. Line 4. FREQUENCY (EA Frequency)

A2.5.6. Line 5. AFFECTING (Type of Equipment Affected by EA, if Known)

A2.5.7. Line 6. EMITTER (Emitter Number, if Known)

A2.5.8. Line 7. TIME (Hour, Minute, and Time Zone of EA Intercept)

A2.5.9. NARRATIVE

A2.5.10. Line 9. TIME (Day-Hour-Minute-Zone-Month-Year)

A2.5.11. Line 10. AUTHENTICATION IS (Message Authentication) The message date-time group is used when required to identify message time of origin. Authentication will be in accordance with established procedures (T-0).

A2.6. EA Termination Report. When all EA ceases, the reporting sequence is:

A2.6.1. EA Termination Report

A2.6.2. Type (s) (electronic, mechanical, communications)

A2.6.3. Time (ZULU)

NOTE: This report is per each type of EA reported. Do not tell EA termination reports unless a secure frequency is available or the message is encrypted.

A2.7. Orbit Report. When a target appears to be orbiting, the reporting sequence is:

A2.7.1. Track designator

A2.7.2. Orbiting left or right

A2.7.3. Position (GEOREF or Lat/Long)

A2.7.4. Time (ZULU). **EXAMPLE:** "Alpha two five zero, orbiting right at Mike Lima Lima Golf two one one five, 1405Z."

A2.8. Split Track Report. If a track splits into two or more segments, the track with the greatest and most immediate threat potential retains the original track designator regardless of the deviation from the original heading. Report split tracks in the following sequence:

A2.8.1. Track designator

A2.8.2. Position (GEOREF or Lat/Long)

A2.8.3. Splitting

A2.8.4. New track

A2.8.5. Position of new track (GEOREF or Lat/Long)

A2.8.6. Heading

A2.8.7. Flight size

A2.8.8. Time (ZULU)

EXAMPLE: "Alpha two five zero, Papa Golf Lima Golf one two one two, Splitting, new track, Alpha two five seven, Papa Golf one three one three, two five zero, two, 1542Z."

A2.9. Merged Track Report. When two or more tracks of the same identification merge to form one track, report that track as one track with a change in the number of airborne objects. Use the track designator of the track with the greatest number of objects. If both tracks contain

the same number of objects, retain the highest track designator. Reporting sequence for merged tracks is as follows:

- A2.9.1. Track designator.
- A2.9.2. Position (GEOREF or Lat/Long)
- A2.9.3. Merged
- A2.9.4. Track designator
- A2.9.5. Flight size
- A2.9.6. Time (ZULU)

EXAMPLE: “Alpha two five zero, Mike Lima Lima Golf one three four zero, merged with Alpha four one two, ten, 1245Z.”

A2.10. Contact Lost Report. If an established track does not appear on the console for a period of two minutes, report it as a “Contact Lost.” **EXAMPLE:** “Alpha two five zero, contact lost.”

A2.11. Flight (Mass) Track Report. Flight tracks result when a number of established tracks within a 10-mile radius and having similar characteristics are grouped under one track designator. Report flight tracks in the following sequence:

- A2.11.1. Flight track
- A2.11.2. Track designator
- A2.11.3. Identification
- A2.11.4. Position of center element (GEOREF or Lat/Long)
- A2.11.5. Flight size
- A2.11.6. Heading
- A2.11.7. Speed
- A2.11.8. Altitude
- A2.11.9. Time (ZULU)

EXAMPLE: “Mass track, Alpha one five zero, Hostile, Golf Papa Charlie Golf one zero four two, one two, zero one six, three six zero, R two seven zero, 1330Z.”

A2.12. Emergency Report. When targets display emergency IFF/SIF modes/codes, notify external agencies in the following sequence:

- A2.12.1. Emergency Report
- A2.12.2. Track designator
- A2.12.3. Position (GEOREF or Lat/Long)
- A2.12.4. Type emergency display
- A2.12.5. Time (ZULU)

EXAMPLE: “Emergency Report, Alpha two five zero, Golf Papa Charlie Golf, Mode 3 seven seven zero zero, 1250Z.”

A2.13. Emergency Report Not Displaying IFF/SIF. When a track appears to be flying an emergency pattern, notify the external agency immediately. The reporting sequence is:

A2.13.1. Emergency Report

A2.13.2. Track designator

A2.13.3. Type distress patterns (left or right) with time of legs flown

A2.13.4. Position (GEOREF or Lat/Long)

A2.13.5. Time (ZULU)

EXAMPLE: “Emergency Report, Alpha, two, two, zero, left one minute, Golf Papa Charlie November one zero four two, 1410Z.”

A2.14. Reinitiating a Track. If a track exhibits significant changes in performance or is determined to be a threat after a cease tell is received, initiate tell again for that track.

Attachment 3

INITIAL COORDINATION MEETING GUIDE(MCC CONDUCT) (BRIEF ONLY APPLICABLE ITEMS)

A3.1. PURPOSE: Foster team building through the use of Operational Risk Management and Crew Resource Management techniques.

NOTE: Crew leadership (MCC, SD and ASO) may need to pre-coordinate training requirements for their respective areas in preparation for this briefing. Care should be taken to identify areas where internal and external crew coordination is critical to the mission being planned.

A3.2. Security

A3.2.1. Briefing area security

A3.2.2. Briefing classification

A3.3. Sign in

A3.3.1. Roll Call

A3.3.2. Recall roster

A3.3.3. Operations Information File (All crew members sign-off)

A3.4. Objectives

A3.4.1. MCC brief overall mission objectives

A3.4.2. All crewmembers develop objectives to support (provide MCC w/copy)

A3.5. Sequence of Events -- Mission Timing

A3.5.1. Scheduled weapons activity

A3.5.2. Scheduled surveillance activity

A3.5.3. Scheduled battle staff activity

A3.6. Training/Currency Requirements & Evaluations

A3.6.1. Battle staff

A3.6.2. MCC

A3.6.3. Weapons

A3.6.4. Surveillance

A3.6.5. Technicians (EPT, ICT)

A3.7. Additional Equipment

A3.7.1. Extra headsets/comm cords

A3.7.2. Chemical warfare mask

A3.7.3. Video cameras

A3.7.4. Recorders

A3.8. Mission Planning Responsibilities

A3.8.1. Know your objectives

A3.8.2. Develop a plan to meet the objectives

A3.8.3. Plan for contingencies

A3.8.4. Thoroughly brief the mission

A3.9. Mission Planning Day Schedule

A3.9.1. Meeting/Brief Times

A3.9.2. Intel briefing

A3.9.3. Coordination meeting

A3.9.4. Crew leadership meeting

A3.9.5. DO Briefing

A3.9.6. Crew release

Attachment 4**COORDINATION/EXECUTION BRIEFING GUIDE (MCC)—(DISCUSS ONLY APPLICABLE ITEMS)**

A4.1. Purpose: This is a business meeting where the open flow of information among all crewmembers is encouraged. All available information should be included during this stage of planning. It is understood that some important planning information may not be available until very late in the day. MCCs develop a plan to brief the entire crew at the coordination/execution briefing. Emphasis is on the mission being planned, not slide production.

Note 1: The briefing will be conducted by the MCC (T-3). If an MCC is unavailable or not participating in the mission the Senior Director will brief applicable areas (T-3). Those areas entitled with a specific crew position are briefed by that crew position. Other area headers with a specific crew position identified (in parenthesis) are briefed by the crew position so stated.

A4.2. Security (MCC)

A4.2.1. Briefing area security

A4.2.2. Briefing classification

A4.3. Check In (MCC)

A4.3.1. Roll call

A4.3.2. Crew Positions

A4.3.2.1. Crew changes (annotate on AF Form 4145)

A4.4. Mission Overview (MCC)

A4.4.1. Tasking

A4.4.2. Objectives

A4.5. Intelligence Briefing (Intel)**A4.6. Weather (Intel/Weather)**

A4.6.1. Lightning w/in 5nm

A4.6.2. High winds

A4.6.3. Other weather factors affecting radar and equipment operation/flying operations

A4.7. Concept of Operations (CONOPS) (MCC)

A4.7.1. Emphasize —Crunch Points of the Mission

A4.7.2. Discuss specific points in the timeline

A4.7.3. Ops Normal requirements

A4.7.4. On-Station requirements

A4.7.5. Fighter Activity/Mission Flow

A4.7.6. Voice Tell

A4.7.7. EA/EP

A4.7.8. Off station requirements

A4.7.9. Power Down Timing

A4.7.10. Site Breakdown/Movement (Field Training Exercise (FTX) or Contingency Only)

A4.8. Requirements

A4.8.1. Currency requirements/discrepancies/evaluations

A4.9. Timing update

A4.9.1. Leadership meeting (MCC, SD, ASO, BSC/CC)

A4.9.2. DO brief

A4.9.3. Crew step time

A4.10. Console requirements and seating plan

A4.10.1. MCC

A4.10.2. Weapons

A4.10.3. Surveillance

A4.10.4. DST (as required)

A4.10.5. EPT

A4.10.6. ICT

A4.11. Mission Crew Commander

A4.11.1. Mission review

A4.11.2. Emergency procedures

A4.11.3. Post-mission debriefing – times & locations

A4.12. Senior Director

A4.12.1. Control Activity

A4.12.1.1. Callsigns

A4.12.1.2. Timing

A4.12.1.3. Communications & Theater/Exercise comm. plan

A4.12.1.3.1. VCAS setup

A4.12.1.3.2. Frequency monitoring contracts

A4.12.1.3.3. Comm changes

A4.12.1.3.4. Comm contracts

A4.12.1.3.5. Comm contingencies

A4.12.1.4. Scheduled airspaces/Area of Responsibility

- A4.12.1.4.1. Agency call sign
- A4.12.1.4.2. Required Letters of Agreements
- A4.12.1.4.3. ARU/MRU status
- A4.12.1.4.4. Control requirements (RADAR, IFF or both)
- A4.12.1.4.5. Correlation Check

A4.12.2. Weapons Mission

- A4.12.2.1. Fight orientation
- A4.12.2.2. Bullseye location
- A4.12.2.3. Marshall Points/CAP Limit Line
- A4.12.2.4. C2ISR Integration

A4.13. Air to Air Combat ID (if not briefed by ASO)

A4.13.1. ID Matrix

- A4.13.1.1. Lack of Friendly
- A4.13.1.2. IFF
- A4.13.1.3. Presence of Enemy
- A4.13.1.4. Hostile Act
- A4.13.1.5. ROE Trip
- A4.13.1.6. Enemy airborne
- A4.13.1.7. Line Crosser
- A4.13.1.8. Self Defense
- A4.13.1.9. Hostile Intent
- A4.13.1.10. BVR Criteria
- A4.13.1.11. ID/ROE
- A4.13.1.12. ID Authority

A4.14. Re-generation Points

A4.15. Kill passing/Kill removal/Regeneration

A4.16. Air to Ground ROE

- A4.16.1. ID Authority
- A4.16.2. Terms
- A4.16.3. Positive Identification (PID)
- A4.16.4. Collateral Damage Estimate (CDE)

A4.17. Strike

A4.17.1. TST

A4.17.2. CAS

A4.18. Other Weapons Tasking

A4.18.1. Check-in

A4.18.2. Tanker

A4.18.3. HVAA

A4.18.4. SAR/CSAR

A4.19. Surveillance Considerations (ASO)

A4.19.1. Surveillance AOI/AOR

A4.19.2. Identify areas within the AOI to be subdivided between STs, if necessary

A4.19.3. Radar set-up

A4.19.4. Sectors/subsectors

A4.19.5. Corridor usage

A4.19.6. IFF Interface

A4.19.7. Surveillance radio/sensor limitations in the AOI/AOR

A4.19.8. Communications plan, frequency changes, and secure radio requirements

A4.19.9. Coordinate track initiation/tracking responsibilities

A4.19.10. Mode 4 requirements/restrictions

A4.19.11. Map(s) required/grid use

A4.19.12. Review link requirements and coordination

A4.19.13. Console priorities

A4.19.14. EA/EP activities

A4.19.15. OM reset procedures

A4.19.16. Emergency Action Plans (EAP)

A4.20. Battle management area

A4.20.1. Air to Air Combat ID

A4.20.2. ID Matrix

A4.20.3. Lack of Friendly

A4.20.4. IFF

A4.20.5. Presence of Enemy

A4.20.6. Hostile Act

A4.20.7. ROE Trip

- A4.20.8. Enemy airborne
- A4.20.9. Line Crosser
- A4.20.10. Self Defense
- A4.20.11. Hostile Intent
- A4.20.12. Beyond Visual Range (BVR) Criteria
- A4.20.13. ID/ROE
- A4.20.14. ID Authority

A4.21. Voice tell

- A4.21.1. Voice tell timing/Agency
- A4.21.2. Agency callsign/location
- A4.21.3. Tracking Responsibilities
- A4.21.4. Track ID plan
- A4.21.5. Air, ground, surface symbology plan
- A4.21.6. Map selection
 - A4.21.6.1. System Center (SC) origin changes
- A4.21.7. EA/EP
- A4.21.8. Data link operation (LINK-16/Link 11/Link 11B)

A4.22. Link Operations (ASO/AST/ICT)

- A4.22.1. OPTASK Link
- A4.22.2. Data link players (callsign/location)
- A4.22.3. Other BMC2 Units
- A4.22.4. Rivet Joint (RJ)/Joint Surveillance Target Attack Radar System (JSTARS)/Airborne Warning and Control System (AWACS)
- A4.22.5. Other ground agencies

A4.23. Link-16 (ICT)

- A4.23.1. Crypto
- A4.23.2. Net Time Reference (NTR)
- A4.23.3. Transmission Modes
 - A4.23.3.1. SATCOM
 - A4.23.3.2. RF
 - A4.23.3.3. SIPR
 - A4.23.3.4. Serial

A4.24. Link-11 (TDL-A)

A4.24.1. UHF/HF.

A4.24.2. NCS.

A4.25. Link 11B (TDL-B)

A4.25.1. Crypto.

A4. 26. Situational Awareness Data Link (SADL)

A4.26.1. Gateway Key.

A4.26.2. Air Key.

A4.26.3. Ground Key.

A4.26.4. Type Tracks (J3.5, etc.).

A4.26.5. Free Text Message.

A4.27. Communication Configuration (DST)

A4.27.1. OM radio configuration

A4.27.2. COMSEC requirements

A4.27.3. Mission radios

A4.27.3.1. Radio requirements—Weapons/Surveillance

A4.27.3.2. Radio release priorities

A4.27.3.3. Have Quick operations

A4.27.3.4. Mickey procedures

A4.27.3.5. SATCOM requirements

A4.27.3.6. HF Radio

A4.27.4. Frequency/radio changes

A4.27.5. Electronic protect

A4.27.6. Authentication and code words

A4.27.7. Review communications plan and specific communications requirements

A4.27.8. Other considerations

A4.27.8.1. Establish intercom procedures

A4.28. Other mission requirements (MCC)

A4.28.1. Emergency procedures/duties

A4.28.2. Mission Contingencies

A4.29. Post mission documentation (MCC/SD)

A4.29.1. Lessons learned

A4.29.2. Mission summary

A4.29.3. Other logs and reports

A4.30. Commander (CC)

A4.30.1. OPCODE/TACON Status

A4.30.2. Battle Staff

A4.30.3. Type of training/real world considerations

A4.30.4. SPINS/OPSEC

A4.30.5. Requirements for mission

Attachment 5

DELETED

Attachment 6

MISSION PLANNING CELL DUTIES AND RESPONSIBILITIES

A6.1. The CRC Mission Planning Cell (MPC) is responsible for reviewing/disseminating the ATO/ACO and other pertinent information to their operations crews for execution. Led by the MPC Chief, the MPC ensures that mission crews are properly prepared to go on-duty with the latest information when they have insufficient time to do section mission planning.

A6.2. MPCs:

A6.2.1. Coordinate CRC employment integration with external units.

A6.2.2. Coordinate with the AOC on the SPINS, ACO, ATO, and the integration of the CRC into the theater employment plan.

A6.2.3. Obtain ATO/ACO/ACP and “breakout” mission information pertinent to the CRC.

A6.2.4. Incorporate command guidance into mission planning products, and build mission “smart packs”.

A6.2.5. Review and disseminate current intelligence information. A6.2.6. Prepare and attend mission crew briefs/debriefs.

A6.2.6.1. Collect and pass “lessons learned” to other mission crews, units, and AOC. Ensure lessons learned are entered into the Theater lessons learned database.

A6.2.6.2. Review theater Lessons Learned databases and prepare briefing for unit.

A6.2.6.3. Catalog and maintain “lessons learned” for further reference.

A6.2.7. Make adjustments to procedures and tactics as required based upon changes to the overall plan, guidance, and lessons learned.

A6.2.8. Plan radar, communications, and TDL employment.

A6.2.9. Standardize mission crew employment (i.e. seating assignments, communication plan, etc.) if possible. Develop deployed unit operating standards.

A6.2.10. Act as the unit focal point for real-time ATO/ACO changes.

A6.2.11. Maintain a current hardcopy of the theater SPINs in the MPC.

A6.2.11.1. Post daily, weekly, monthly SPINs changes in the hardcopy of SPINs.

A6.2.11.2. Review and brief applicable SPINs changes to the mission crew.

A6.2.12. Prepare maps and assists in planning/modifying MCS database, to include the ATO.

A6.2.13. Schedule crew duty cycles in coordination with the mission crew MCC(s).

A6.2.13.1. Request MPC augmentation from the DO as needed.

A6.2.13.2. Coordinate with DO and MCCs to rotate MPC members onto duty shift as required to maintain operational awareness.

A6.2.14. Prepare and conduct a positional changeover briefing with the oncoming MPC Chief IAW the Positional Changeover briefing guide and unit checklists, if applicable.

NOTE: The above list is not comprehensive. Units should use the list above to develop locally generated MPC task lists IAW AFTTP 3-1 TACS and tailored to the theater and mission.

A6.3. The MPC ensures the operations crews are familiar with application of the following operational planning products.

A6.3.1. Air Campaign Plan

A6.3.2. ATO or Integrated Tasking Order (ITO)

A6.3.3. Theater SPINS (Including Weekly and Daily updates)

A6.3.4. Airspace Control Plan (ACP)

A6.3.5. Airspace Control Order (ACO)

A6.3.6. Area Air Defense Plan (AADP)

A6.3.7. Country Studies (State Department/Central Intelligence Agency [CIA] products)

A6.3.8. JAOP

A6.3.9. Joint Communications Electronic Operating Instruction (JCEOI)

A6.3.10. OPLAN

A6.3.11. OPORD

A6.3.12. OPTASKLINK

A6.3.13. Established Rules of Engagement (ROE)

A6.3.14. CJCS Standing ROE

A6.3.15. Theater-specific ROE

A6.3.16. Mission-specific ROE (often termed "serial ROE")

A6.3.17. Applicable multinational or coalition ROE

A6.3.18. Theater Missile Defense (TMD) Plan

A6.3.19. Documents pertaining to Intelligence Preparation

A6.3.20. OPGON, TACON, ADCON relationships

Attachment 7

DEGRADED OPERATIONS

A7.1. Degraded Operation Reporting Procedures. The descriptions listed below are not all inclusive and would be used for reporting to HHQ/AOC and lateral C2 agencies current capability during daily contingency/deployed operations. The CRC CC may identify more detailed level data based on mission capability requirements, i.e. IFF only for the radar may meet Fully Mission Capable (FMC) to accomplish the tasked mission.

A7.1.1. Level 1 Fully Mission Capable:

A7.1.1.1. Data link capable.

A7.1.1.2. Able to exchange surveillance and BMC2 information over data links.

A7.1.1.3. Control functions are fully operational.

A7.1.2. Level 2 Limited Operations:

A7.1.2.1. Limited data link.

A7.1.2.2. Some degradation in computer capability.

A7.1.2.3. Able to exchange limited surveillance and BMC2 information over data link.

A7.1.2.4. Track capacity limited.

A7.1.2.5. Basic control functions are operational.

A7.1.3. Level 3 Data Link Restricted:

A7.1.3.1. Data links are inoperative/not available, but computer is operational.

A7.1.3.2. Can voice tell surveillance information and commands and enter them manually into the system.

A7.1.3.3. Basic control functions are operational.

A7.1.4. Level 4 Manual:

A7.1.4.1. Complete loss of computer capability.

Attachment 8**PRIORITIES FOR RECORDING ASSIGNMENTS**

A8.1. The priority of recording transmissions is mission dependent

A8.1.1. When able the following will be recorded in this order:

A8.1.1.1. Air/ground common

A8.1.1.2. Other air/ground frequencies

A8.1.1.3. External point-to-point involving aircraft control

A8.1.1.4. BMC2 lines

A8.1.2. Priority for recording assignment by position will be:

A8.1.2.1. SD/WD (if possible)

A8.1.2.2. MCC

A8.1.2.3. ASO/AST

A8.1.2.4. ST

NOTE: When deployed, these priorities may be modified per guidance outlined in the theater OPLAN/OPORD.

POSITIONAL CHECKLISTS

Figure A9.1. Positional Checklists.

[illegible]

Checklist #	Subject	B C	B S C	M C C	S D	A S O	A S T	W D	E P T	D S T	I C T	S T
N-02	Pre-ECU/OM Power Up			X	X	X	X	X		X	X	X
N-03	ECU Power Up			X	X	X	X	X		X	X	X
N-04	OM Power Up			X	X	X	X	X		X	X	X
N-05.1	Database Initialization			X		X	X			X		
N-05.2	Database Write			X		X	X			X		
N-05.3	Copy a SSU/File			X		X	X			X		
N-05.4	Select A Directory			X		X	X			X		
N-05.5	Review Directory			X		X	X			X		
N-05.6	Create Directory			X		X	X			X		
N-05.7	Rename Directory			X		X	X			X		
N-05.8	Copy Directory			X		X	X			X		
N-05.9	Delete Directory			X		X	X			X		
N-05.10	Print Directory			X		X	X			X		
N-05.11	Select File			X		X	X			X		
N-05.12	Edit File			X		X	X			X		
N-05.13	Rename File			X		X	X			X		
N-05.14	Delete File			X		X	X			X		
N-05.15	Compare File			X		X	X			X		
N-05.16	Review File			X		X	X			X		
N-05.17	Print File			X		X	X			X		

Checklist #	Subject	B C	B S C	M C C	S D	A S O	A S T	W D	E P T	D S T	I C T	S T
N-05.18	Copy File			X		X	X			X		
N-05.19	Change Directory Default			X		X	X			X		
N-05.20	Change File Attributes			X		X	X			X		
N-05.21	Software Patch			X		X	X			X		
N-05.22	Patch Status			X		X	X			X		
N-05.23	Delete Patch			X		X	X			X		
N-05.24	Patch Map Mode			X		X	X			X		
N-05.25	Data Base Load			X		X	X			X		
N-05.26	OCUWS Setup for Data Base Load			X	X	X	X	X		X	X	X
N-06	OCUWS Setup			X	X	X	X	X		X	X	X
N-07	SDC Power Up								X			
N-08.1	R/R Power Up			X	X	X	X	X		X	X	X
N-08.2	R/R Operation			X	X	X	X	X		X	X	X
N-09.1	PRU Paper Loading			X	X	X	X	X		X	X	X
N-09.2	PRU Setup			X	X	X	X	X		X	X	X
N-10.1	VCAS Checkout			X	X	X	X	X		X	X	X
N-10.2	CM&P VCAS Assignments			X	X	X	X	X		X	X	X

Checklist #	Subject	B C	B S C	M C C	S D	A S O	A S T	W D	E P T	D S T	I C T	S T
N-10.3	CIU Recycle			X	X	X	X	X	X	X	X	X
N-10.4	VCAS OM Setup			X	X	X	X	X		X	X	X
N-10.5	VCAS Configuration			X	X	X	X	X		X	X	X
N-10.6	VCAU Configuration								X			
N-11.1	GRC-242 Power Up			X		X	X				X	
N-11.2	GRC-242 HF Data Set Up			X		X	X				X	
N-11.3	GRC-242 HF Voice Set Up			X		X	X				X	
N-11.4	VRC-47 VHF Set Up			X	X			X				
N-11.5	VRC-89 VHF Set Up			X	X			X				
N-11.6	ARC-186 VHF Set Up			X	X			X				
N-11.7	OCUWS VHF Set Up			X	X	X	X	X		X	X	X
N-11.8	GRC-171 Set Up			X	X	X	X	X				
N-11.9	ARC-164 Set Up			X	X	X	X	X	X			
N-12.1	GRC-171 MWOD Load			X	X	X	X	X				
N-12.2	PRC-113 HAVE QUICK Load			X	X	X	X	X				

Checklist #	Subject	B C	B S C	M C C	S D	A S O	A S T	W D	E P T	D S T	I C T	S T
N-12.3	ARC-164 MWOD Load			X	X	X	X	X	X			
N-12.4	ARC-164/KYK- 13 HQ Load			X	X	X	X	X	X			
N-12.5	HAVE QUICK TOD/AJ Test			X	X	X	X	X	X			
N-12.6	GRC-171 Manual Clock Start			X	X	X	X	X				
N-12.7	ARC-164 Manual Clock Start			X	X	X	X	X				
N-12.8	PRC-113 Manual Clock Start			X	X	X	X	X				
N-12.9	OM HAVE QUICK Load			X	X	X	X	X		X		
N-12.10	GPS HAVE QUICK TOD			X	X	X	X	X		X		
N-13.1	OCUWS KY- 57/KY-58 Load			X	X	X	X	X		X	X	X
N-13.2	CM&P KY-58 Load			X	X	X	X	X		X	X	X
N-13.3	TPS-75 KY-58 Load								X			
N-13.4	KYV-5 Setup			X		X	X			X		
N-15.5	KYV-5 Load			X		X	X			X		
N-13.6	KY-68 Load			X	X	X	X	X		X	X	X

Checklist #	Subject	B C	B S C	M C C	S D	A S O	A S T	W D	E P T	D S T	I C T	S T
N-13.7	KG-40A Power Up and Load					X	X				X	
N-13.8	KG-84A Power Up and Load					X	X				X	
N-13.9	KGV-8 Power Up and Load					X	X				X	
N-14.1	Link-11A Set Up			X		X	X				X	X
N-14.2	Link-11A Activation			X		X	X				X	X
N-14.3	Link-11A POFA Test			X		X	X				X	X
N-14.4	Link-11A Troubleshooting			X		X	X				X	X
N-15.1	Link-11B Set Up			X		X	X				X	X
N-15.2	Link-11B Activation			X		X	X				X	X
N-15.3	Link-11B POFA Test			X		X	X				X	X
N-15.4	Link-11B Troubleshooting			X		X	X				X	X
N-15.5	Link-11B Remote POFA Test			X		X	X				X	X
N-16.1	TDL-C Set Up			X	X	X	X	X			X	
N-16.2	TDL-C Activation			X	X	X	X	X			X	
N-17.1	LINK-1 Set Up			X		X	X				X	

Checklist #	Subject	B C	B S C	M C C	S D	A S O	A S T	W D	E P T	D S T	I C T	S T
N-17.2	LINK-1 Activation			X		X	X				X	
N-18.1	ATDL-1 Set Up			X		X	X				X	
N-18.2	ATDL-Activation			X		X	X				X	
N-19.1	NDL Load			X		X	X				X	
N-19.2	Link-16 Set Up			X		X	X				X	
N-19.3	Link-16 Activation			X	X	X	X				X	
N-19.4	TADIL-J Troubleshooting			X		X	X				X	
N-20	Sensor Registration					X	X				X	X
N-21	UPA-59A Setup								X			
N-21.1	Load Mode IV								X			
N-22	RADAR Alignment								X			
N-23	Min Operational Requirements			X	X	X	X	X	X	X	X	X
N-24	Stop Sensor Registration					X	X				X	X
N-25	TADIL-J Termination			X	X	X	X				X	
N-26	ATDL-1/LINK-1 Termination			X		X	X				X	
N-27	TADIL-B Termination			X		X	X				X	

Checklist #	Subject	B C	B S C	M C C	S D	A S O	A S T	W D	E P T	D S T	I C T	S T
N-28	TADIL-A termination			X		X	X				X	
N-29.1	UHF Radio Power Down			X	X	X	X	X		X	X	X
N-29.2	VHF Radio Power Down			X	X	X	X	X		X	X	X
N-29.3	HF Radio Power Down			X	X	X	X	X		X	X	X
N-30	PRU Power Down			X	X	X	X	X		X	X	X
N-31	R/R Power Down			X	X	X	X	X		X	X	X
N-33	MMC Purge					X	X		X			
N-34	OCUWS Power Down			X	X	X	X	X		X	X	X
N-35	OM Power Down			X	X	X	X	X		X	X	X
N-36	Before Leaving Position			X	X	X	X	X	X	X	X	X

Distribution if divided into separate duty position checklists. If only a single checklist per OCUWS/DSC is created, matrix does not apply.

Attachment 10**CRC EMPLOYMENT STANDARDS****Part 1 – Command and Control Standards****Section A. Mission Planning**

1. Responsibilities
2. Mission Planning Timing and Content
3. Mission Planning Briefing
4. Mission Planning Documents
5. Mission Planning Cell (MPC) (if active)
 - 5.1. Mission Planning Members & Specific Tasks
 - 5.2. Crew Member Seating

Section B. Operations Module Set-Up & Mission Conduct for Live Training Missions

1. Scope Configuration and Check-out
2. Radio Configuration and Check-out
3. RADAR/IFF Check-out
4. Correlation Checks
5. ATO information loaded
6. Voice/Video Recording

Section C. Briefs

1. MCC
2. SD and ASO/T Briefs
3. Mission Crew Pre-Coordination

Section D. Internal Coordination

1. Intercom & Chat Techniques
2. Adversary AWO/WD Coordination
3. Crew Coordination for all mission types
 - 3.1. ST to AST
 - 3.2. ICT to AST
 - 3.3. EPT to AST
 - 3.4. AST to MCC/SD
 - 3.5. AST to ICT/EPT/ST
4. Unit Command Center (UCC)
 - 4.1. MCC/SD to SD
 - 4.2. CC/BSC to ASO/T
 - 4.3. CC/BSC to MCC/SD
 - 4.4. CC/BSC to External Agencies

Section E. Air Surveillance

1. Responsibilities
 - 1.1 Mission Planning
 - 1.2. Blue/Red Air Game Plan
 - 1.3. Blue/Red Aircraft Capabilities
 - 1.4. Code words
 - 1.5. Bullseye
 - 1.6. RADAR and Radio Coverage
 - 1.7. Identification Criteria & Matrix
 - 1.7.1. Criteria for Live/Sim missions
 - 1.7.2. Terminology
 - 1.7.3. Positive Enemy Indication (PEI)
 - 1.7.4. Lack of Friendly (LOF) Indication
 - 1.7.5. Minimum Risk Route (MRR)
2. Detection
3. Tracking
4. Tracking Priorities
5. Identification
 - 5.1. Requests for ID
6. Mode 4 Interrogation
7. Hostile Declaration
8. Air Picture Regeneration
 - 8.1. Surveillance Role in Battlespace Awareness Picture
 - 8.2. Fighter Reported Contacts - Beyond Line of Sight (BLOS)
 - 8.3. Maneuvers by suspect track
 - 8.4. Number of Contacts in Group
 - 8.5. Engagement Results
 - 8.6. Minimum Risk Routes (MRRs)
 - 8.7. Other In-Theater C2 & ISR Assets
 - 8.8. ROE

Section F. Weapons Standards

1. Aircraft Control
 - 1.1. Check-in
 - 1.2. Situation Brief
 - 1.3. Initial Picture & Picture Labels
 - 1.3.1. Callsign Usage
 - 1.3.2. Core Information
 - 1.3.3. Digital Bullseye and BRAA
 - 1.3.4. Anchoring 3 or Fewer Group Locations
 - 1.3.5. Anchoring more than 3 Group
 - 1.3.6. Group Fill-In Information
 - 1.3.7. ID Information
 - 1.3.8. Inner Group Formation

- 1.3.9. Maneuvering Groups Using Core Information
- 1.3.10. Maneuvering Groups after a Picture Label has been applied
- 1.3.11. Faded Communications Techniques
- 1.3.12. Electronic Attack (EA)
- 1.3.13. Bounding Range
- 1.4. Pre-Commit Picture
- 1.5. Air-To Ground Communications
- 1.5. General Terminology
 - 1.5.1 Kill Box Terminology
 - 1.5.2. Kill Box Coordination/Deconfliction
 - 1.5.3. Tasking Communications
 - 1.5.4. Time Over Target (TOT)
 - 1.5.5. Battle Damage Assessment (BDA)
 - 1.5.6. Surface Threat Passage
- 1.6. Imminent Threat Warning (ITW)
- 1.7. TACREP
- 1.8. Post Mission Reconstruction
- 1.9. Debriefs

Attachment 11

PERIODIC RADAR EVALUATION PROGRAM WORKSHEET FOR CRC (PAGE 1 OF 2)

DATE & TIME _____ SIGNATURE _____

PART I. OBJECTIVE ASSESSMENT (STANDARDS)

1. The assessment of the mobile radar unit will be made at the beginning of each operations shift by the PREP Officer or designated representative. The single word PREP assessment (satisfactory, marginal, etc.) will be recorded in the Operations Logbook.

2. Daily equipment parameters IAW 31P3-2TPS-75-56WC-1:

a. List MDS for:

CH1 _____ CH2 _____ CH3 _____ CH4 _____ CH5 _____ CH6 _____ Circle satisfactory if within above parameters, unsatisfactory if not.

b. List Normal Receiver Sensitivities for: CH1 _____ CH2 _____ CH3 _____ CH4 _____ CH5 _____ CH6 _____ Satisfactory: All six channels exceed 50 dB Marginal: Five channels exceed 50 dB

Unsatisfactory: Four or less channels exceed 50 dB Circle One: (SAT) (MARGINAL) (UNSAT)

List MTI Receiver Sensitivities: CH1 _____ CH2 _____ CH3 _____ CH4 _____ CH5 _____ CH6 _____ Average exceeds 52 dB (circle one): (SAT) (MARGINAL)

d. UPX-27/37 Presentation (circle one): (SAT) (MARGINAL) (UNSAT) Satisfactory: SIF is 1 NM in trail, centered on radar presentation & presents an unbroken video presentation Marginal: SIF is greater than 1 NM in trail, not centered on radar presentation, & presents a broken video presentation Unsatisfactory: No IFF/SIF presentation

e. Refractive Index Inserted (circle one): YES NO

f. Radar Power Output (circle one): SAT (2.0 to 4.0) MARGINAL (less than 2.0)

g. Radar & IFF/SIF Shutdown Switches Operational: _____

Deviations/Limitations Noted: _____

PART II. SUBJECTIVE ASSESSMENT: RADAR PRESENTATION (Page 2 of 2)

1. WX/ECM Video: Is weather displayed: Yes _____ No _____

Comments: _____

2. Ground Clutter: Normal _____ Abnormal _____

Comments: _____

3. Permanent Echoes and ATC Correlation Checks:

P.E. Coordinates (AZRAN) Actual

P.E. 1 _____ Plus/minus 2 degrees/2 NM

P.E. 2 _____ Plus/minus 2 degrees/2 NM

ATC Track Coordinates Actual

AZRAN _____

AZRAN _____

AZRAN _____

Circle One: (SAT) (UNSAT)

NOTE: If unable to get ATC coordinates, try an adjacent radar station.

4. Blip Scan Ratios & Digital Height Readout (DHRO): Track a low, a medium, and an upper medium aircraft in each 90 degree quadrant for 20 consecutive sweeps. Record search and SIF, Mode C, and DHRO on RCE form.

Overall Blip/Scan Ratio: Radar _____ % SIF _____ % Satisfactory: 75%

or greater Marginal: 50-74% Unsatisfactory: 49% or below NOTE:

Upper and lower forced angles must be considered when determining height accuracy.

5. Detect Fade Range:

a. LOW: 0-5000 feet (circle one): (DETECT) (FADE)

(1) Radar Range: _____ /SIF Range: _____

(2) Azimuth: _____

(3) Altitude: _____

b. MEDIUM: 5100-15,000 feet (circle one): (DETECT) (FADE)

(1) Radar Range: _____ /SIF Range: _____

(2) Azimuth: _____

(3) Altitude: _____

c. UPPER MEDIUM: 15,100-25,000 feet (circle one): (DETECT) (FADE)

(1) Radar Range: _____ /SIF Range: _____

(2) Azimuth: _____

(3) Altitude: _____